

PENCIL POINTS

SEPTEMBER

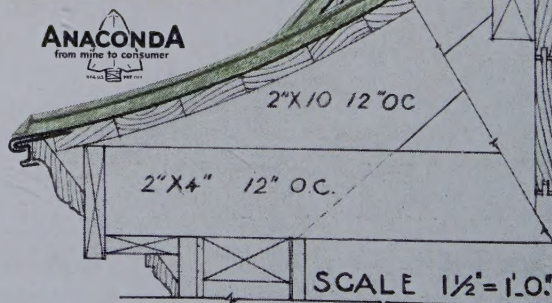
1941



TYPIFYING the manner in which standing seam sheet copper roofing may be used over bays and entrances to impart both warmth and color, and to accentuate the structure's individuality

Anaconda Copper

THE AMERICAN BRASS COMPANY—General Offices: Waterbury, Connecticut • Subsidiary of Anaconda Copper Mining Company • In Canada: ANACONDA AMERICAN BRASS LTD., New Toronto, Ont.



GRAYSON



BRONZE

C. F. Rosborg, Arch.

FOR PERMANENCE

Long famous for beauty, dependability and lifetime service, bronze has again become one of the most popular metals for store front members. Fortunately, too—for this durable metal lends an air of richness and permanence that means increased sales and prestige to any establishment.

Equally important, Kawneer bronze members offer many possibilities for distinctive store front design. And, when Kawneer Rolled Construction (with fully resilient sash) is used throughout, architect and contractor can safely assure the owner low maintenance, and trouble-free service.

Get latest data from the Kawneer distributor, from SWEETS, or by writing THE KAWNEER COMPANY, NILES, MICH.



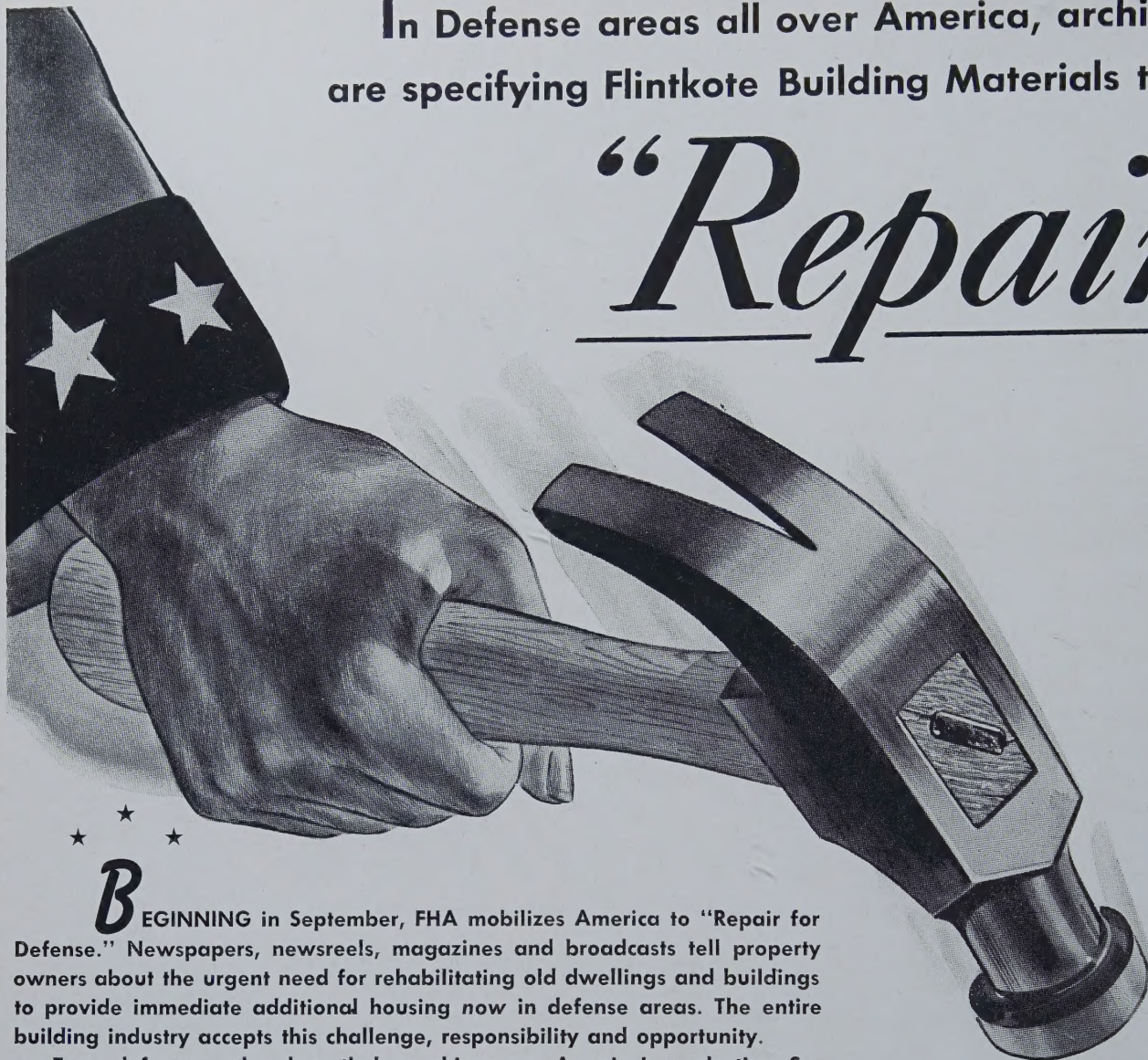
NEW FULL-SIZE DETAILS on Kawneer Rolled Construction—simplified for present day requirements. Write for your copy today.

IT'S EASY TO DESIGN AND INSTALL

Kawneer STORE FRONTS

In Defense areas all over America, architects
are specifying Flintkote Building Materials to . . .

"Repair"



B

EGINNING in September, FHA mobilizes America to "Repair for Defense." Newspapers, newsreels, magazines and broadcasts tell property owners about the urgent need for rehabilitating old dwellings and buildings to provide immediate additional housing now in defense areas. The entire building industry accepts this challenge, responsibility and opportunity.

Every defense worker decently housed increases America's production. So, tie-in with this practical FHA campaign in your community. Aid your country's defense effort, and help yourself, by encouraging more property owners to "Repair for Defense."

Now is the time to go into action all along the Flintkote line. Flintkote roofing, siding and insulation products are especially designed for modernizing, improving and protecting residential and commercial structures. Use these dependable Flintkote building materials to speed the improved housing facilities so urgently needed now.

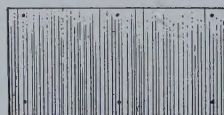


INSULATION BOARD PRODUCTS

Flintkote offers a *complete* new line of structural and decorative insulation board products made from native Southern timber. Large sheets and attractive insulating tile and plank are ideal for rehabilitation . . . building needed extra rooms in wasted attic and basement space.

ASPHALT SHINGLES

One of the world's oldest and largest asphalt roofing manufacturers, Flintkote is famous for pioneering improvements, innovations and distinctive styling in asphalt shingles. Colorful Flintkote Asphalt Shingles include styles for every roofing and re-roofing need.

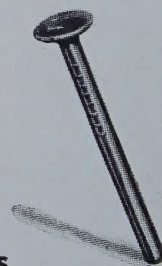


ASBESTOS SIDINGS

Cover worn out, unsightly, old walls with fireproof, permanent, beautiful Flintkote Asbestos Sidings. A wide line avoids monotonous repetition . . . fills every siding need. Three butt lines, three surface finishes, two sizes and several attractive colors are available.

COLD PROCESS ROOFING

For flat roof maintenance and new work, Flintkote has developed a tested system for the *cold application* of roofing materials, eliminating heating equipment and the hazard of fire during installation. Seven specifications available cover all types of new work and maintenance.



for Defense!"



INSULATED BRICK SIDING

Low cost insulation *plus* finished, attractive siding make

Flintkote Insulated Brick Siding ideal for rehabilitating all types of residential and commercial buildings. Flintkote Insulation Board ($\frac{1}{2}$ " thick) is saturated and coated with asphalt and surfaced with colorful mineral granules to make these easy-to-apply panels that simulate expensive brick.

ASBESTOS SHINGLES

Available in many attractive colors and styles, Flintkote Asbestos Shingles provide fireproof, permanent protection for roofs. They cannot rot, rust or burn.

ROLL AND BUILT-UP ROOFINGS

Flintkote offers a *complete* line of time-tested prepared roll roofing and built-up roofing materials. Roll roofings are available smooth or mineral surfaced in a wide variety of weights.

ASPHALT COATINGS AND PLASTICS

There is a product for every waterproofing, damp-proofing, protective and roofing requirement in the line of Flintkote asphalt coatings and plastics. Famous Flintkote Static Asphalt will not flow, alligator or crack . . . will outlast any known type of bituminous material exposed to the weather.

ROCK WOOL HOME INSULATION

Conservation of fuel needed for National Defense highlights the importance of Flintkote Rock Wool Home Insulation. Available in blanket, bat, semi-bat, granulated and natural forms for all types of application in old or new buildings.

ASPHALT SIDINGS

Ideal for renovating, Flintkote Asphalt Sidings are fire-resistant, attractive and easy to apply. Available in brick-type strips and rolls and many other distinctive strips and individual shingles that never require paint.



THREATENED FUEL SHORTAGES . . . Headlines daily tell home owners the need for Flintkote home insulation before winter.

• Flintkote dealers recommend and sell Flintkote nationally advertised building materials because they know every Flintkote product provides a bigger dollar's worth of protection, assures the lasting satisfaction which builds good will.

ASBESTOS SHINGLES

Dutch Lap
Hexagonal

ASBESTOS SIDINGS

Waveline Sidings
Shake Siding
Straight-Edge Sidings
Tapertex Siding
Woodgrain Sidings

ASPHALT SHINGLES

Tapered Strips
Thikbut Strips
Cedartex Thikbut Strips
Stalwart Strips
Hexagon Strips
Square Butt Strips
Rextab Strips
Flintlock Shingles
Staple-Lox Shingles
Dutch Lap Giant Shingles
Super Giant Shingles

ASPHALT SIDINGS

Embossed Brick Strip
Siding
Thikbrik Siding Strips

ASPHALT PAINTS & PLASTICS

BUILDING PAPERS & FELTS

BUILT-UP ROOFING MATERIALS

COLD PROCESS BUILT-UP ROOFING

HARDBOARD PRODUCTS

Flintboard
DeLux Flintboard
RexBoard
HardBoard
HardBoard Tile
Tempered HardBoards
Tempered Flooring

INSULATED BRICK SIDING

INSULATION BOARD

Asphalt-Coated Sheathing
Building Board
Insulating Lath
Insulating Tile
Insulating Plank
Roof Insulation Board
Thriftex Wallboard

ROCK WOOL INSULATION

Granulated Rock Wool
Dura Bats (Paper-backed)
Roll Bat Blankets
Long Fibre Rock Wool

ROLL ROOFINGS

Mineral Surfaced
Smooth Surface

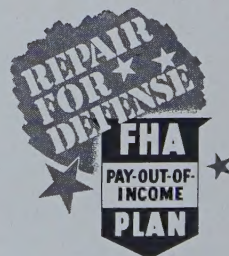
ROOFING ACCESSORIES

STATIC ASPHALT COATINGS

Products of the same high quality are sold by the Beckman-Dawson Roofing Company, and by the Richardson Roofing, affiliates of The Flintkote Co.

REMIND YOUR CUSTOMERS:

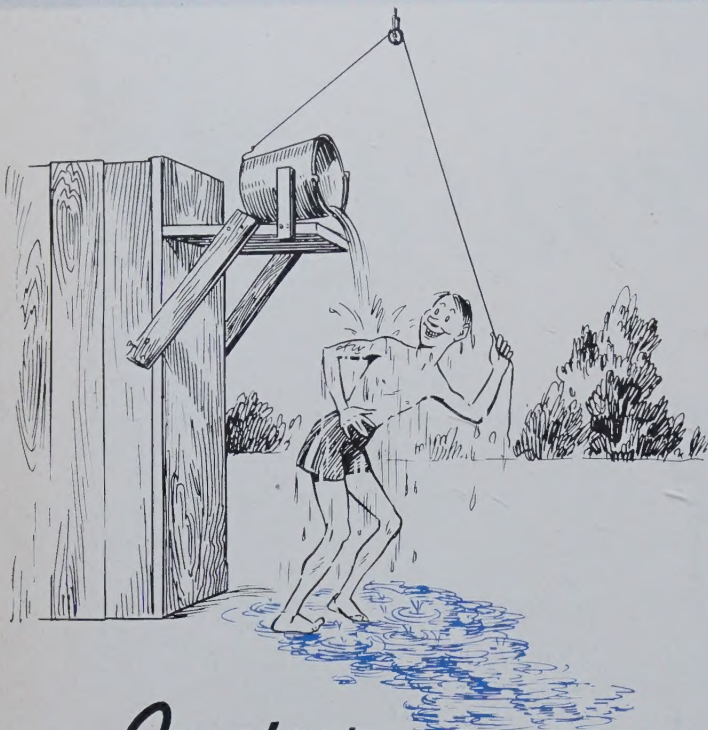
Repair for Defense, Repay by
the Month through FHA Plan



The FLINTKOTE Company

30 ROCKEFELLER PLAZA, NEW YORK, N. Y. Atlanta . . . Boston . . . Chicago Heights . . . Detroit . . . New Orleans . . . Waco . . . Los Angeles

SHOWERS



Amateur ..and Professional

Since time immemorial man has delighted in the nerve-tingling sensation of clear, clean water flowing over his body.

Now SUNTILE, the color-balanced real clay tile, gives you showers that bring new enjoyment to this invigorating sensation . . . not alone for men, but for women and kiddies, too.

Thanks to the genuine livability of a color-balanced SUNTILE bathroom, the American family can now linger daily in its shower 'til



the last sq. in. of the bugless and wax-free SUNTILE walls and floors are thoroughly, but harmlessly drenched.

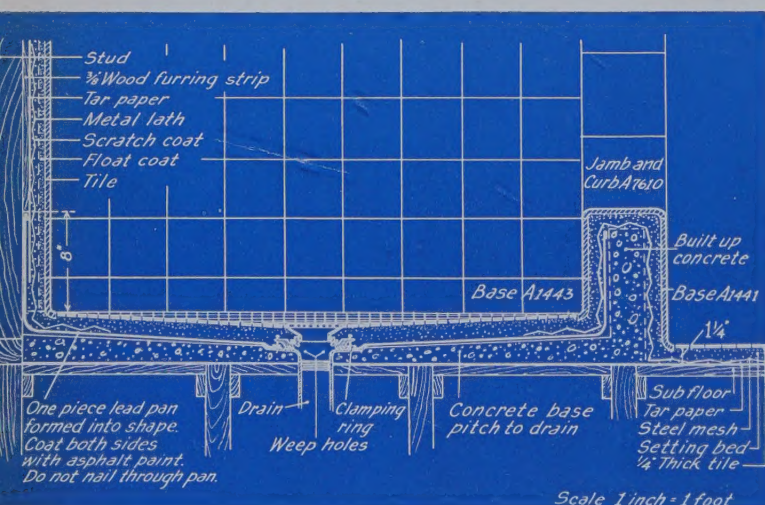
The new, original, and creative things that are being done with SUNTILE today are presented for you in Sweet's Section 11, Catalog 2, 1941 edition. New color combinations, designs, and ideas are featured.

See the Suntile Rainbow Chest with its interchangeable panels of actual size tiles at your Suntile contractor's showroom. Refer to the classified section of your telephone directory under "Tile Contractors" for list of selected Suntile dealers.

Leak Proof Shower Stall Detail

To secure a leak proof shower insist upon the following points shown in the accompanying detail:

1. Use of the proper type drain.
2. Proper sloping of concrete fill under lead pan.
3. Thorough coating of entire lead pan on both sides with an asphalt paint.
4. Proper forming of pan from one piece of lead.
5. Sufficient turn up of lead at walls and curb (at least 8 inches above finished floor at walls).
6. Furring above lead at walls to allow metal lath to be placed in a plumb position. (Be certain that lath is not nailed through pan. Nail at furred points only).



The Cambridge Tile Mfg. Co.

Dept. P-16 - Cincinnati, Ohio

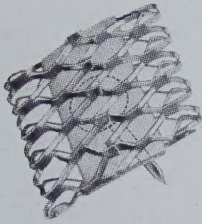
Offices and Warehouses in

New York City, Brooklyn, Chicago

Dallas, San Francisco, Los Angeles



**THIS ODD LITTLE NAIL
IS THE REASON**



**GOLD BOND
FLOATING WALLS
RESIST
PLASTER-CRACKS**

IT'S a simple thing. Just a nail, a strip of felt, and a square of metal lath. But until Gold Bond research engineers developed the patented "Floating Wall" nail, plaster walls and ceilings that would not crack were thought impossible. Now every architect and builder who uses the "Floating Wall" nail with Gold Bond gypsum lath and plaster eliminates nine-tenths of the causes for plaster cracking.

The Gold Bond "Floating Wall" System offers other distinct advantages, too. It provides effective reduction of room-to-room noise, and complete fire-resistance. Yet the cost is so low this finer complete wall system can be used in everything from a deluxe apartment hotel to the most modest country cottage.

This exclusive Gold Bond development is additional proof that you build *better*

with Gold Bond. Gold Bond's active research and dependable service have made National Gypsum Company the largest exclusive wall and ceiling material manufacturer in the world, serving the entire country through 21 model plants. There are 150 *better* Gold Bond products for every type interior—including wallboard, plaster, lime, metal lath, wall paint, insulation and sound control materials.

More than 300 trained Gold Bond representatives are at your service—and when you specify Gold Bond exclusively, National Gypsum Company stands squarely behind the complete wall and ceiling job.

Consult the Gold Bond Section of Sweet's or write today for detailed specifications on the "Floating Wall" and other Gold Bond Wall Systems. NATIONAL GYPSUM COMPANY, BUFFALO, NEW YORK.

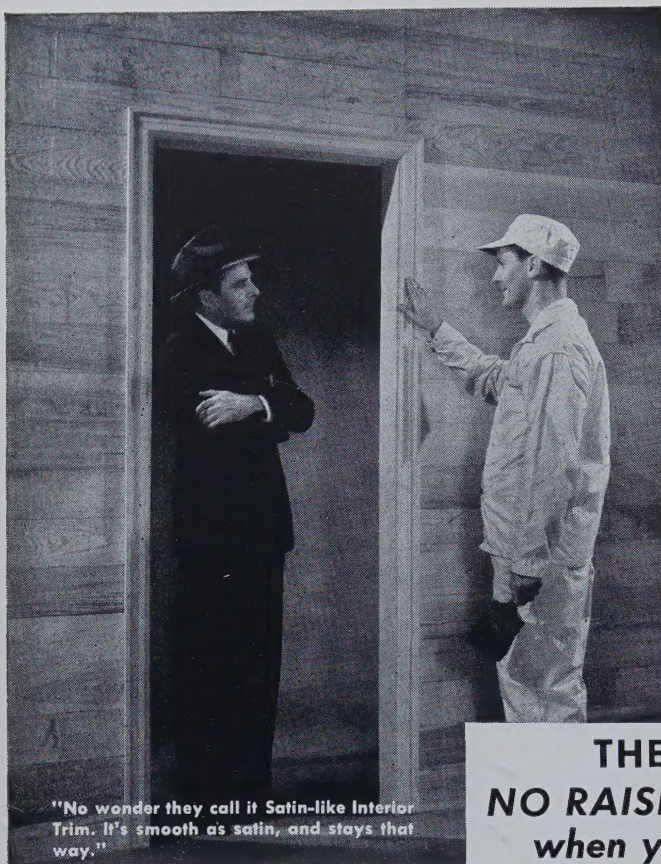


NO SPECIAL EQUIPMENT IS NEEDED TO APPLY GOLD BOND FLOATING WALLS. Any good lather can drive the patented nails between the panels of gypsum lath—leaving plaster base free from rigid attachment to framing. Plastering is done in the usual manner. In spite of these advantages the only extra cost is the price of the nails.

BUILD BETTER WITH
Gold Bond
Everything - for walls & ceilings

Producing units at:

NEW YORK, N. Y. . . . CLARENCE CENTER, N. Y. . . . AKRON, N. Y. . . . PORTSMOUTH, N. H. . . . NATIONAL CITY, MICH.
FORT DODGE, IA. . . MEDICINE LODGE, KAN. . . ROTAN, TEX. . . SAVANNAH, GA. . . LUCKEY, O. . . BELLEFONTE, PA. . . YORK, PA.
ORANDA, VA. . . SALTVILLE, VA. . . NILES, O. . . MOBILE, ALA. . . NEWBURGH, N. Y. . . ALEXANDRIA, IND. . . DUBUQUE, IA. . . DOVER, N. J.



"No wonder they call it Satin-like Interior Trim. It's smooth as satin, and stays that way."

**THERE'S
NO RAISED GRAIN
when you paint**



The natural affinity of Arkansas Soft Pine to paint, enamel and stain has been proved in thousands of livable homes like this.

ARKANSAS SOFT PINE

... it grows that way in the tree!

That's why Arkansas Soft Pine is a "natural"—for beautiful satin-like interior woodwork; for most wood-finished surfaces which call for paint, enamel or stain.

As it grows in the tree, Arkansas Soft Pine contains very little pitch. What may exist is neutralized during manufacture by thorough seasoning in humidified air. This process produces well conditioned lumber of extra soft, uniform texture and proper moisture content. There's no "pull" between summer and winter growth

(grain, to you). Result: priming coats are absorbed evenly, grain stays flush and finishing coats remain smooth.

Absence of pitch in Arkansas Soft Pine minimizes the hazard of bleeding through or discoloration of paint. That's why it gives such wonderful service as siding and exterior trim. It

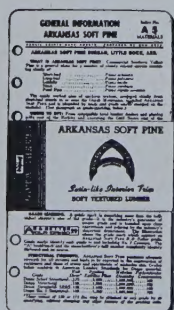
doesn't deteriorate under hot sunshine, because it holds paint.

Protect your specifications against lumber faults which lead to paint failure. Specify Arkansas Soft Pine Satin-like Interior Trim and mouldings, finish and framing lumber, because it gives you that protection, backed by a 30-year record.

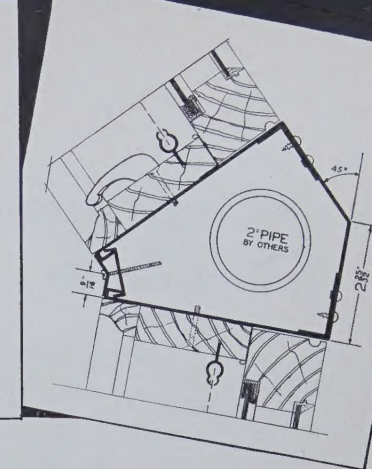
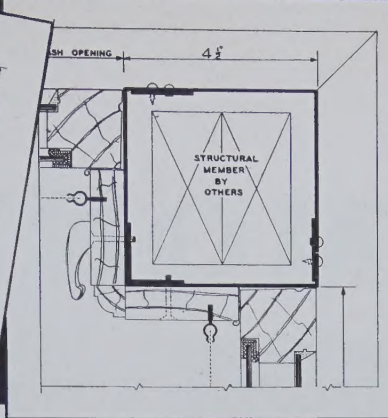
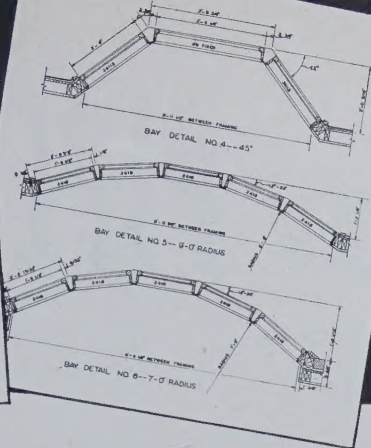
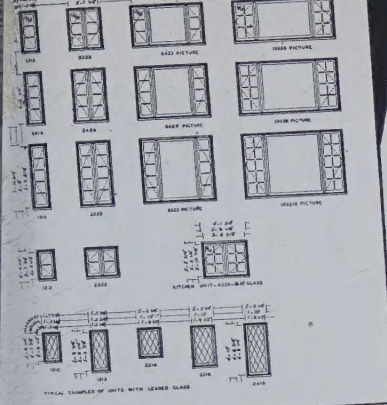
How to specify, technical data, construction stress tables, lumber grades to use in given locations, are included in our DON GRAF DATA SHEETS which are yours for the asking. Write for your set today.

Arkansas Soft Pine is trade and grade marked, conforms to American Lumber Standards, qualifies for Federal specifications and is sold by retail lumber dealers east of the Rockies.

SENT
ON
REQUEST



ARKANSAS SOFT PINE BUREAU
914 BOYLE BUILDING
LITTLE ROCK, ARKANSAS

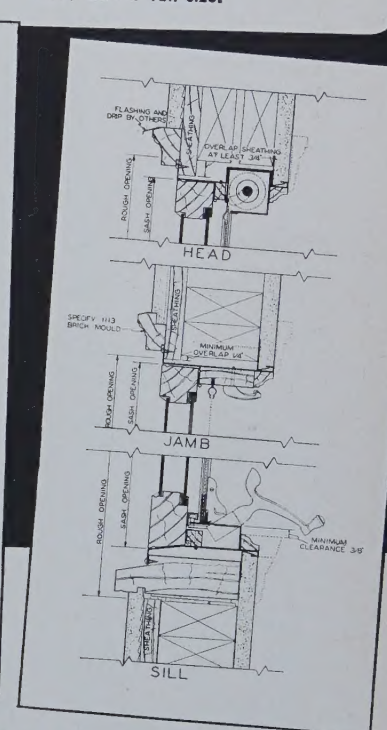
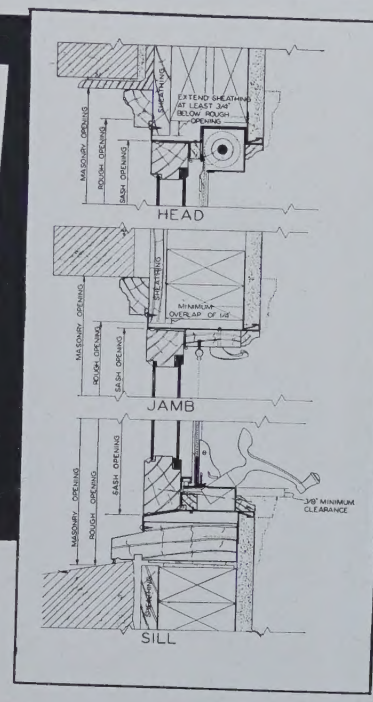
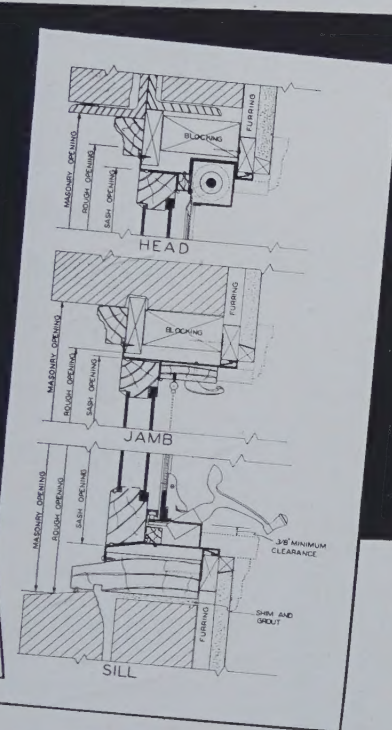
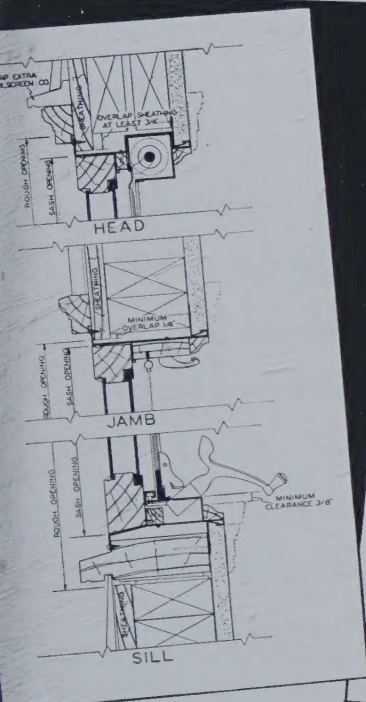


TYPICAL CASEMENT UNITS. These details show a few of the wide variety of standard Pella Casement Window units available for use in your plans. Many other types of stock casement units shown in new Casement Detail File.

BAY DETAILS. Ideal for quickly including a bay in your plans. Pella Casements can be arranged in practically any type of bay. Types most widely used are shown in new Pella Casement Detail File.

CORNER MULLION. This detail shows Pella construction where two casement units join at 90° corner. Strength obtained without sacrifice of light. Other types also shown in new Pella Casement Detail File.

45° MULLION. This detail is shown full-size in the new Pella Casement Detail File. Pella joining mullions are available in practically any degree angle. Principal ones shown full-size.



2 x 4 STUD WALL. One of a wide variety of wall construction details available in the complete File. Details also shown for 2x6 STUD WALLS. Note built-in Rol-screens feature.

9" BRICK WALLS. Complete head, jamb and sill details are also included for 8" masonry and 13" masonry wall construction in new Casement Detail File. Note built-in Rol-screens feature.

BRICK VENEER. Complete head, jamb and sill details are also included for brick veneer (plaster return) construction in new Casement Detail File. Note built-in Rol-screens feature.

STUCCO EXTERIOR. An outstanding example of the versatility of Pella Casement Units for all types of wall construction. Details are also shown on other types of Stucco Construction in new Casement Detail File.

New Pella CASEMENT WINDOW DETAILS

Save Valuable Drafting Time

Pella Casements are doubly enjoyable to work with when you have these 22 new rose-leaf pages of scaled details on Pella Casement Window Units. These details have been especially prepared for tracing right into your plans, thus eliminating further drafting on window construction. Pages come in a handy, durable A.I.A. e-size pocket.

OVER 300 ARRANGEMENTS FROM STOCK-SIZE UNITS

Pella Casement Units with built-in Rol-screens and dual-glazing are available in stock sizes 1, 2 or 3 lights wide and up to 5 lights high to set singly or in combination with other fixed or ventilating units. For all types of wall construction—regular, angular and corner mullion details. Complete table of sizes and styles plus complete specifications covering hardware, dual-glazing and weather-stripping are included in this unusual set of Details. WRITE TODAY FOR YOUR FREE FILE!

Pella CASEMENTS

VENETIAN BLINDS • ROLSCREENS
ROLSCREEN COMPANY • PELLA, IOWA



FILL IN Mail Today

ROLSCREEN COMPANY, Dept. 191, Pella, Iowa

Yes! Please send me FREE the new File of Pella Casement Window Details in A.I.A. folder.

Name _____

Firm Name _____

Address _____

RAYMOND PIPE PILES



So wide is the range of activities of the Raymond organization that few people realize their scope, not having learned that *Raymond executes foundation contracts involving all recognized types of piles*. For instance, do you know that Raymond designs, supplies, and drives steel pipe piles . . . both closed and open end? The illustration shows one of the many steel pipe pile jobs, completely and satisfactorily executed under Raymond responsibility. Therefore, your inquiries regarding any type of sub-surface support can be safely referred to Raymond for prompt and unbiased attention.

44 YEARS OF SUCCESSFUL EXPERIENCE

THE SCOPE OF RAYMOND'S ACTIVITIES includes every recognized type of pile foundation—concrete, composite, precast, steel, pipe and wood. Also caissons, construction involving shore protection, ship building facilities, harbor and river improvements and borings for soil investigation.

RAYMOND CONCRETE PILE
COMPANY •

140 CEDAR STREET • NEW YORK, N. Y. Branch Offices in Principal Cities

CRITICAL YOUTH WIELDS THE FLAIL

Come September, many of us find ourselves again students. To you, PENCIL POINTS, through this column, offers an opportunity to submit articles on architectural subjects, not exceeding 400 words, and due the tenth of each month preceding the month of publication.

We hope a generous amount of letters will reach us each month, and that many of you may enjoy seeing in print some thought of your own.

P.P.

EPOCH IN WAITING

As each day passes it becomes increasingly apparent that those of us who thought the present war would be short and localized are going to be wrong. Obviously the entire world is going to feel the violent repercussions. As more countries join the fray the end is farther from sight. Breathless and bewildered we sit before our radios trying to gain some comprehension of the catastrophic events. Around us we are conscious only of our own accelerated living; ahead we see only depression, despair, darkness.

Yet, fundamental happenings produce fundamental changes. Out of the great disillusion which lies ahead may come a great and powerful cry on the part of humanity for a new way of life. For this reason now is a time of great consequence for those who feel that man still has something better to find. It is a commanding opportunity to build a new world, a new humanity, a new living.

This new living cannot be brought about by a great prophet

or powerful group of men operating through some sort of "ism." It must be the natural result of a sincere social consciousness on the part of all men to live in peace. We must direct our great technical abilities toward producing this new world for better living.

Of all human activities, that of building and planning the structure is going to be important. The building profession, with its city planners, designers, engineers, and workmen must work together to produce the physical side. They must, however, keep pace with the sociologists and educators who are working to help the new man find his place in the world, and the scientists who are eliminating the remaining natural obstacles which stand in the way of our new living.

The architect can play his part by effecting the consolidation of the planning-building profession into a smoothly-operating, integrated organization in which each takes his place according to his qualifications. The ridiculous separations between architecture, city planning, engineering, and building must and will be eliminated. The reference in this new planning-building profession must be to tomorrow, not yesterday.

Style in architecture will remain because it is there by nature. Tradition in architecture must go because it is not bred of fundamental thinking but of superficial intellectual sophistication.

In architecture, as in all other branches of human activity, much of which has gone before is good

and fine; but no one must feel for a moment that there is not a vast amount of room for improvement and that this improvement is not coming. As surely as man still continues living on earth so surely will he see improvement in himself.

CARLETON M. WINSLOW, JR.
University of Southern California

IN UNITY THERE IS . . .

Architects, probably more so than any other major profession, have less unity, organization, and protection than the average person might imagine.

Of all the professions, architecture is one of the most important, if not the most important, simply because it deals with human shelter, which in turn is one of the fundamentals of self preservation.

Everyone claims some kind of a shelter, which immediately relates each individual with the business of an architect, if not directly with it. By hypothesis, it would follow that the architectural profession would be the most extensive, the most organized, and most profitable of all. Unfortunately, it is none of these, and indeed it is characterized by the contrary.

Let the architects blame only themselves. Why have certain monthly magazines been permitted to run house plan after house plan, which can be secured with specifications for less than \$1.00 in some cases? One never opens a magazine and sees a doctor's prescription which might be cut out and taken to a drug store to be filled. Nor does one ever notice information

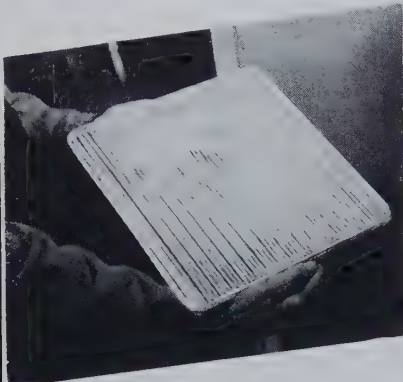
"A short distance south of Natchez, Mississippi, stands the aberration evidenced by this photograph. One is terrified upon first approach but momentum is soon regained when observing the adjacent beer sign, resulting in the urge to stop and enter 'Mammy's Petticoats'. Functional, I would say. Natchez—where the swains of yesterday sipped their juleps amidst bric-a-brac'd, staid mansions—where today they quaff ale behind Mammy's Hoops."

L. MILTON KING, A.I.A.
Monroe, Louisiana

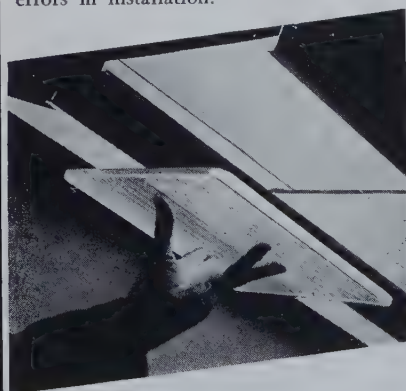


For Predicted Performance in FLUORESCENT LIGHTING *Specify HOLOPHANE Controlenses*

Every element to derive the utmost from Fluorescent Lighting can be planned before installation through the precise control of Controlenses.



The 3 Holophane Controlenses scientifically designed for the purpose are doubly economical. They save through increased efficiency. They save costly errors in installation.



These Controlenses, measuring 11" x 12" allow flexibility of design and offer the advantages of quick, simple installation. Consult Holophane engineers on any lighting problem—no charge. Write for your Controlense Book giving design information and complete architectural data.

3 Controlenses for 3 Basic Light Distributions

1. INTENSIVE—For Uniform Spacing

2. CONCENTRATING —For Accent Lighting or High Ceilings



3. EXTENSIVE—For Vertical Surfaces or Low Ceilings



Holophane
COMPANY, INC.
342 MADISON AVENUE
NEW YORK CITY

SINCE 1898
THE HOLOPHANE CO. LTD.
385 YONGE ST., TORONTO, CAN.

published by lawyers giving proper procedure for many of their practices. In the two latter professions, their excellent organization and associations make it so one must visit their offices for information, and pay dearly. Architects do have local chapters, but one belongs or not, and price cutting is notorious, to mention but one of the vices due to lack of organization.

Why is it possible for the great majority of low-cost house builders to hire a local contractor to build their house according to a nondescript sketch on the back of an old envelope, plus the contractor's fascinating imagination? Every architect is convulsed when he drives through rural sections, as well as inexpensive developments. It is this local contractor or his agency who is largely responsible, but what is done to control it?

There are large areas of rural country completely unrestricted as to building and builders. We certainly know of no such section where an unlicensed man may try a case in court or perform a surgical operation.

Why should not every structure be licensed and submitted for approval to a state-wide architectural bureau? This would give protection to the entire state, whereas now, this exists only in sections supervised by ordinances and zoning laws of a limited locality. Added to the services of this bureau, there could be free advice and planning to those who could not afford an architect. This need not injure the practice of the private office. If a project as great as a public state health system can determine who is needy and who is not, and give service, (at the same time not injuring the private practice of doctors), the same should work for the architect.

If a house owner with as little as \$2500 to invest had some professional advice he could be assured a better investment, and the public saved some unfortunate contractor's dream. If every structure in a state had to be approved, either by a petition filed through one's privately-engaged architect or through a public state agency, the architect would begin to enjoy his own right.

Most of this has concerned the house builder, who is just one part of the large building scheme. Needless to say, the engineer has increased his realm from purely engineering projects to the architect's field, and, we must say, in a number of cases has impressed many as a bull in a china shop. Engineers,

by the nature of their subject and training, when making their appearance in the architect's field, totally lack a feeling for the warmth, charm, and planning achieved by the subtleness and imagination of a trained architect.

So it seems the architect's greatest competitors are: women's magazines just full of little "house secrets"; the total lack of organization and protection enjoyed by other professions; the engineer; and to be sure, the delicate, ariel, little architect himself, who must learn the best defense is a great offense.

Would it be too amiss for the local chapter of the A.I.A. to organize a bit of publicity to impress upon the public the great service an architect is able to render the individual, as well as the appearance of the entire country?

If a little organization and publicity has kept a bottle of Coca Cola in everyone's hand day after day, think of the possibilities with all the architect has to offer.

PAUL PIPPIN
Columbia University

* * *

PEIXOTTO FUND

Those who have admired work of the late *Ernest Peixotto* will be interested to know of the organization of the Ernest Peixotto Memorial Committee headed by *Royal Cortissoz*, distinguished New York Art Critic, proposing to establish a Trust Fund to provide periodically a substantial award for a deserving American mural painter under 30 years. Competitions will be held and selection of the prize-winner will rest with a jury of independent artists and critics to be appointed by the Memorial Committee. Gifts for this Fund should be sent to *Peter Grimm*, Treasurer, 51 East 42nd Street, New York.

MUSEUM EXHIBITIONS

Two exhibitions of interest to the architectural profession have been scheduled for Fall presentation by The Museum of Modern Art, New York. The Fall season will open September 24 with an exhibition, *Organic Design in Furniture and Furnishings*, to remain on view until November 9. At this exhibit, four Latin-American industrial designers will also show their work.

On November 26 the Museum will show the work of *Eric Mendelsohn*, a leading modern architect formerly of Germany, now living in this country.

TOLERANCE

We know only too well how much you need steel. We are doing everything humanly possible to get it for you. Every man in this company is doing his utmost to produce every possible pound of material.

Because of the seriousness of this nation's emergency, defense must come first. We are cooperating with the Government to the limit as you would want us. At the same time we are keenly aware of the needs of our customers, and we are doing our best to serve you, too.

Tolerance is one of the virtues that will help tremendously in this hour of our country's need.

THE YOUNGSTOWN SHEET AND TUBE COMPANY
YOUNGSTOWN, OHIO

GIVE YOUR CLIENTS THIS EXTRA PRODUCTION SPACE



Consider how much your clients will want the production aids these famous interlocking steel-slat doors (originated by Kinnear) afford! For instance . . .

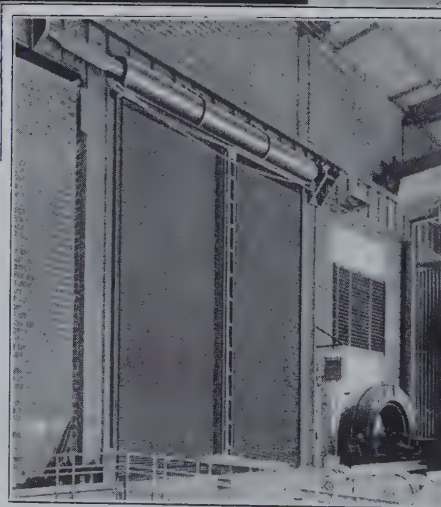
Coiling upward action permits full use of all floor, wall and ceiling space. Rugged all-steel construction reduces maintenance, avoids loss-time repairs.

No protruding mechanism to obstruct cranes, conveyors, ducts, or light.

Doorways completely cleared in one smooth, easy, rapid operation.

Ideally adapted to motor operation, with multiple-point remote control if desired.

All-steel curtain protects production against fire, weather, intrusion, sabotage, etc.



Slats easily replaceable—quick, easy, economical repair if accidentally damaged.

Excellent blackout protection for all doorways without special equipment. (Write for details on other Kinnear Rolling Door advantages!)

THE KINNEAR MANUFACTURING CO.
1900-20 FIELDS AVE., COLUMBUS, OHIO
Offices and Agents in Principal Cities
Factories: San Francisco, Columbus, O.

HERE, THERE, THIS AND THAT

POTOMAC PATTERN

This slightly (?) overcrowded community is begging for mercy. As a direct reflector of your government's activities, your nation's capital shows a similar fix. No help, no materials and no let-up in sight. Private architects and engineers simply cannot keep up with the demand for services. Housing, both defense and private, is at full speed. Apartments of extraordinary magnitude keep popping out of the ground and in the most unusual places, remodelling projects of any and every nature pepper the city, and contractors are going beserk trying to get building materials. Not only those specified but acceptable substitutes. It's getting so that architects will have to specify alternate materials or design their structures in such ways that non-priority materials are eliminated. And Brother, what *is* not unavailable to-day is unwanted.

Of course, if forced, it is certain that some of us will feed necessity a bit of ingenuity. But

Forced or not, we'll find a way

*To build it not like yesterday
For nimble minds will steal
or borrow*

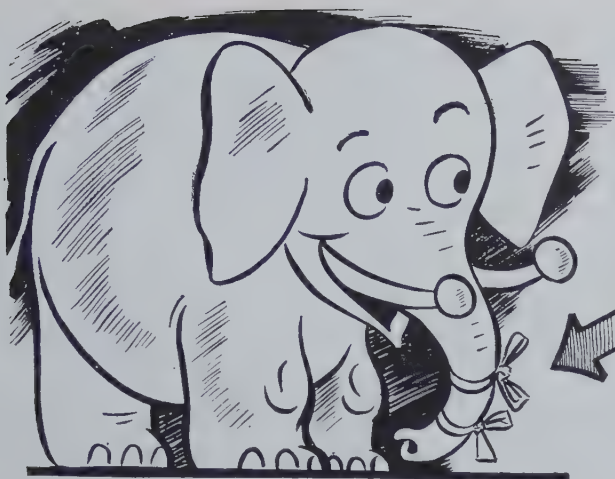
*Matter and methods that to-
morrow*

*Are the steps which lead Men
toward*

Progress-going ever forward.

In spite of all arguments, regarding accessibility, transportation, proximity of workers' homes to office, etc. Congress voided all reasonableness and allowed the War Department to proceed with plans for the world's largest office building (to house 40,000 employees) to be erected across the Potomac in Arlington County, Virginia—on ground that was set aside for future expansion of the world famous Arlington Cemetery. If desecration is the right word, then the erection of this mammoth workhouse can be termed only that. Besides, the answer to the transportation problem of needed roads, bridges, and buses will only be found in additional costs in fares and taxes to the greatest number of employees who live and will

(Continued on page 42)

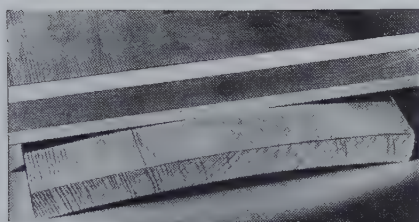


*Don't Forget
these 2 things...*

Rustproofing for Metal!

REZ for Wood!

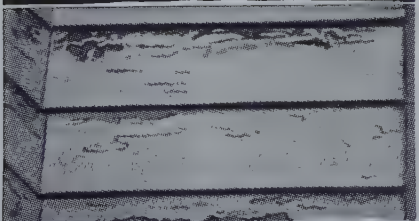
TRADE MARK REG. U. S. PAT. OFF.



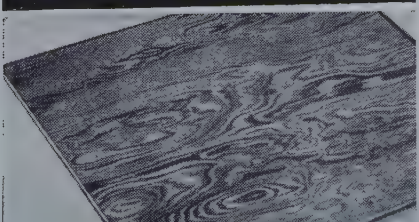
REZ CONTROLS DIMENSION



REZ CONTROLS DECAY



REZ CONTROLS MOISTURE



REZ CONTROLS GRAIN RAISE

WOOD is man's most useful building material. But like all other building materials, it too, needs protection . . . protection against two agents of certain destruction: Moisture and Decay.

Laucks research chemists have now provided this *double protection* with Laux REZ. This unique synthetic resin sealer, applied in plant or on the job, protects wood against (1) Moisture, by penetrating into the wood fibre, leaving a tough, water-repellent resin deposit on cell walls, (2) against decay, by its potent fungicidal content (pentachlorophenol).

On floors, doors, fir plywood, millwork, sash, siding, trim, etc. . . . exterior or interior . . . REZ controls these twin destroyers, Moisture and Decay. And, it provides *low cost insurance* against their effects: rotting, stain, swelling, binding, grain raise, loss of dimension, weathering and wear.

REZ is proven by millions of gallons used by builders, painters, woodwork and wood product plants from coast to coast. Applied by brush, saturated cloth, spray or dip treatment, REZ is quick drying, gives a perfect base for paint or stain.

Paint, hardware or lumber dealers can supply REZ . . . or write direct to your nearest Laucks office for complete information.

REZITING—Industrial Wood Treatment

WATER-REPELLENT TOXIC-PRESERVATIVE

LAUCKS research laboratories have formulated a comprehensive series of low cost wood treatments for plant application by manufacturers of millwork, siding, plywood, sash, doors, etc. . . . REZITE 1, REZITE 2, REZITE FUNGISEAL,* REZITE TTS-176 Floor Seal, REZITE Edge Sealer, REZITE Vapor Stop, and six LAUXTOLS.**

*Meets requirements of National Door Manufacturers Association.

**Manufactured according to Permatol formulae of Western Pine Association.

FREE—To architects, manufacturers, and builders, complete scientific information on industrial REZITING system. . . . Write your nearest Laucks office.

I. F. LAUCKS, Inc.

MANUFACTURING CHEMISTS

SEATTLE — 911 Western Avenue
PORTSMOUTH, Va. — Commerce and Broad Streets
LOS ANGELES — 859 East 60th Street
CHICAGO — 6 N. Michigan Boulevard
VANCOUVER, B. C. — Granville Island



ANY DESIGN

in full natural colors with low cost Porcelain Enamel

THE porcelain enamel front of the Chestnut Tree Restaurant in San Francisco stands out from every other store front on the two blocks on which it faces. Done in seven bright colors, it is equally attractive by day and under neon illumination at night. The background is a light cream, while the base panel and border frame are in dark blue. The life-size chestnut tree has two shades of brown on the trunk and branches and two shades of green in the leaves, while the chestnuts are a reddish brown. The cut-out welded letters on the small marquee over the doorway and window are enameled a reddish brown.

Porcelain enamel on U·S·S VITRENAMEL was chosen because of the beauty and colorfulness of the effect, and the fact that it was easier to erect and is easy to keep clean. A further advantage is that colors can be duplicated exactly to create a standard effect when other units of the chain are built.

No other structural material possesses the versatility of porcelain en-



FRONT DESIGNED BY Frank Stauffacher; general contractors, William C. Tait, Inc.; both of San Francisco; enameling by the Ferro Enameling Company, Oakland, California on U·S·S VITRENAMEL Sheets; furnished and installed by Frank Allen Ferro-Porcelain Constructors, San Francisco and Los Angeles.

amel. Any design is easily reproduced at low cost, because the steel base is inexpensively formed. Striking and pleasing effects are easily obtained with an almost unlimited choice of colors. And porcelain enamel is adaptable to almost any purpose — interior or exterior. It is equally good for new work or remodeling; on

masonry, wood or steel construction.

To be sure of quality work always specify the base metal. U·S·S VITRENAMEL Sheets are specially made for fine porcelain enameling. They are uniformly flat and have the necessary ductility for shaping. Their prepared surface assures better enameling and workmanship.

U·S·S VITRENAMEL SHEETS

CARNEGIE-ILLINOIS STEEL CORPORATION

Pittsburgh and Chicago

Columbia Steel Company, San Francisco, Pacific Coast Distributors

United States Steel Export Company, New York

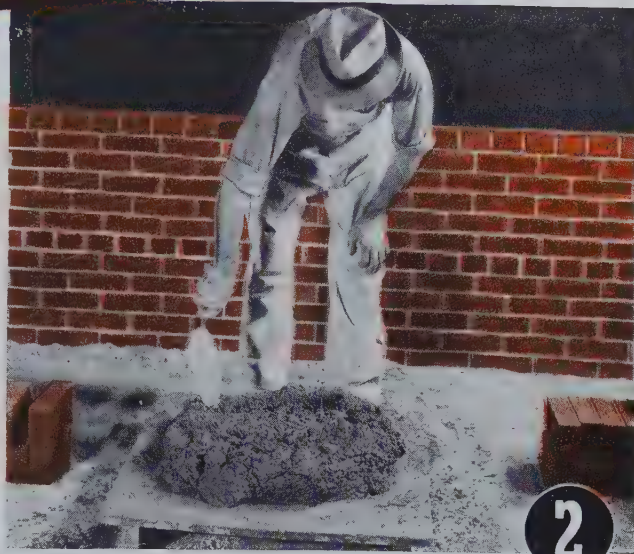


UNITED STATES STEEL

MAKE THIS TEST -
Prove **BRIXMENT is BEST!**



1 Mix a batch of 1-3 Brixment mortar (above) and a batch of 50-50 cement-lime mortar made with the same proportion of sand (right). Get any competent bricklayer to test



2 them on the board—to spread them on the wall—to lay up a few brick with each of the two mortars. Then ask him *which* has the best workability.

BRIXMENT Assures **More Economical Brickwork**

Aside from the cost of the brick itself, the most expensive item in masonry construction is the bricklayer's time.

Therefore the most economical mortar you can buy is the one that enables the bricklayer to lay the most brick per day. You cannot afford to give your bricklayer any mortar which causes unnecessary work, such as constant retempering, stooping to the board to replace mortar that failed to stick when he threw up the head-joint, etc.

To secure economical brickwork, the mortar must

have excellent workability.

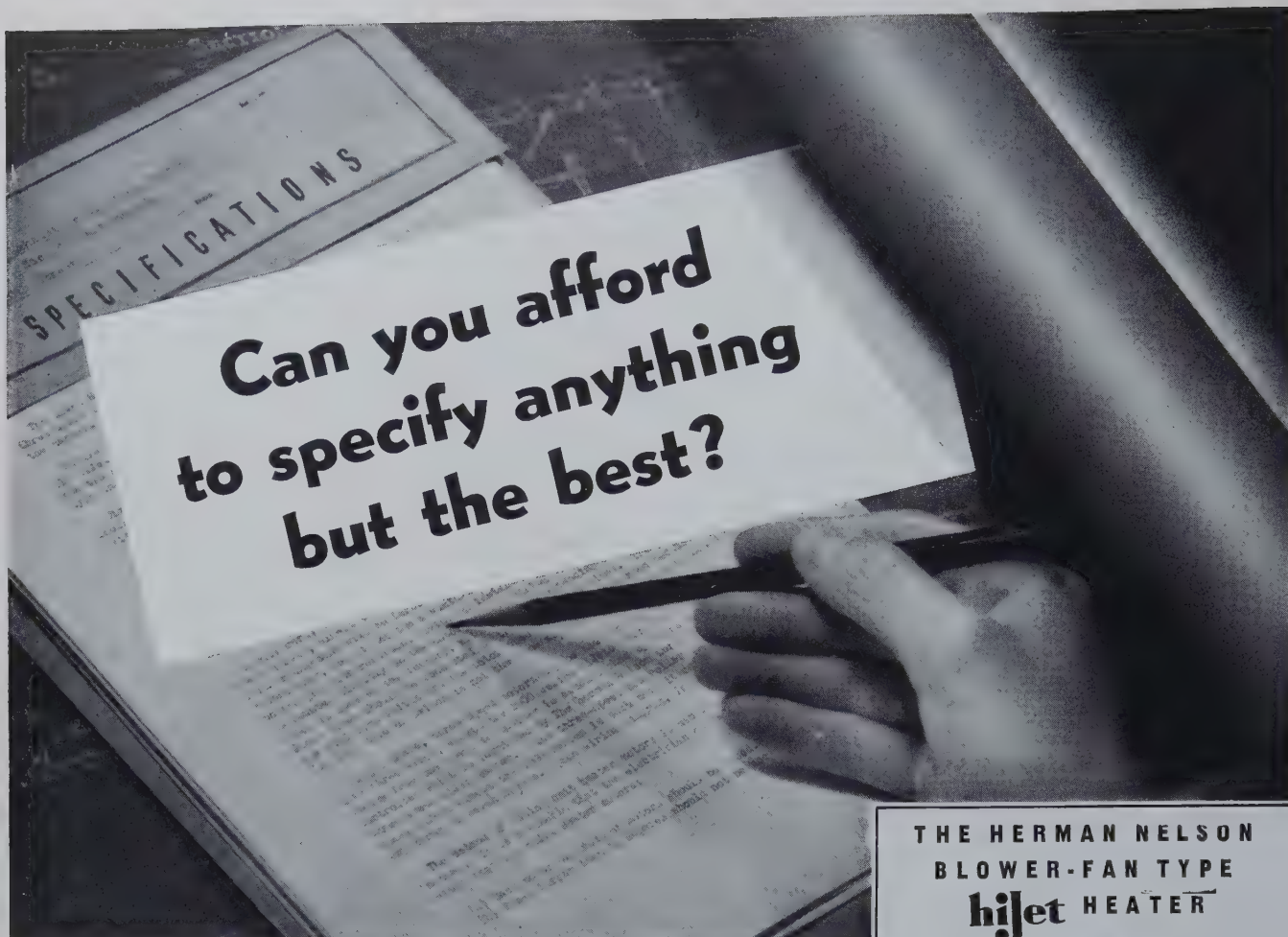
The plasticity of Brixment mortar is *ideal*. It approaches that of straight lime putty. It enables the bricklayer to do faster, neater brickwork, with the brick well bedded and the joints well filled.

This is the principal reason why Brixment reduces the cost of brickwork. But in addition, less labor and supervision are required in mixing. No soaking or slaking. No mortar is wasted. And Brixment mortar makes a neater job that costs less to clean down.

BRIXMENT

For Mortar and Stucco

Louisville Cement Company, Incorporated, Louisville, Kentucky. Cement Manufacturers for Over a Century

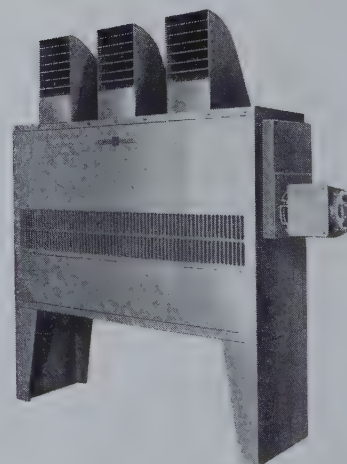


ARCHITECTS in all sections of the country know that the extra value built into Herman Nelson Products means a great deal to them.

Because of this extra value, thousands of their clients have enjoyed the satisfaction that comes with greater dependability and operating economy. There are many reasons for this widespread owner satisfaction. Most important, however, is the policy established when The Herman Nelson Corporation was organized—never to lose sight of the old-fashioned ideals of quality.

Knowing that Herman Nelson Products can be relied upon to provide superior results for their clients, Architects are unwilling to relinquish this assurance of quality because of the slight additional cost of this equipment.

**THE HERMAN NELSON
BLOWER-FAN TYPE
hiJet HEATER**



This hiJet Heater is a large capacity unit designed and engineered to provide efficient and economical space heating. Like other Herman Nelson products, this unit is sturdily constructed of the finest materials and incorporates many exclusive features of design.

Complete information regarding this and other products can be obtained from Herman Nelson Sales Representatives located in principal cities or from the Home Office at Moline, Illinois.



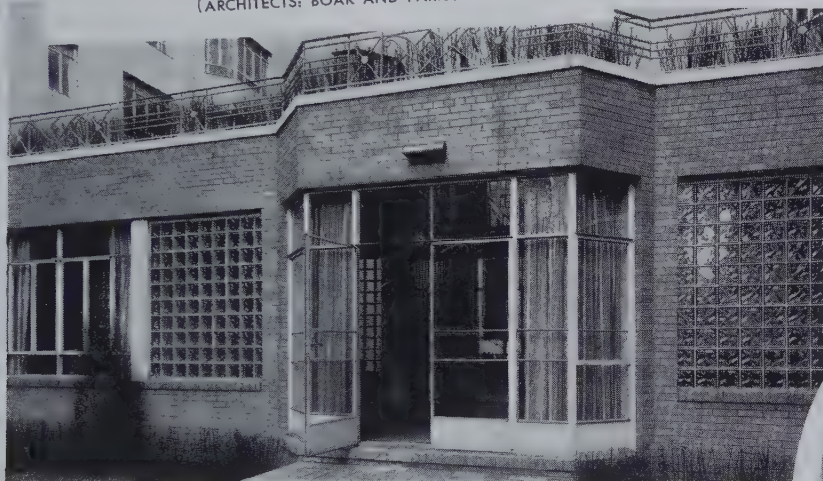
THE HERMAN NELSON CORPORATION MOLINE ILLINOIS

Manufacturers of Quality Heating, Ventilating and Air Conditioning Products

Decorated with Daylight!

*PC Glass Blocks contribute daylight
and beauty to Westmore Apartments,
New York City*

(ARCHITECTS: BOAK AND PARIS)



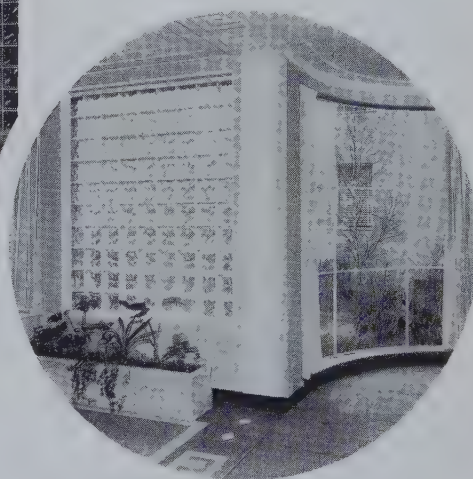
EXTERIOR APPEARANCE of PC Glass Block panels is smart and modern. In a dwelling place their use is likely to result in a greater appeal to prospective tenants. The agents for this new apartment report it already 98 per cent rented.

ARCHITECTS find in PC Glass Blocks a material that is versatile in the extreme. These blocks, in their eight patterns and three sizes, are unusually attractive in appearance. They transmit daylight generously, preserve privacy, reduce heating, cleaning, maintenance and lighting costs. They insulate effectively against outside noises. They are relatively new and interesting to the public. And they are suitable for use in almost any type of building construction, from modest home to skyscraper. Send the coupon for our free book, which contains many illustrations of actual applications of PC Glass Blocks, as well as information on physical properties, construction details, and other specific data you will find helpful.

"PITTSBURGH" stands for Quality Glass and Paint



PC GLASS BLOCKS were generously used in the attractive new Westmore Apartments, New York City. Adding to the good looks of the lobby as well as increasing the amount of daylight which enters it, panels of glass blocks were alternated with clear glass casements.



COMBINING PRACTICAL QUALITIES of insulation, easy cleaning, and protection of privacy with their light-transmission and appealing appearance, PC Glass Block panels are becoming increasingly popular in every type of construction. This panel was attractively placed in juxtaposition to a bay window looking out on the garden of the apartment.



GLASS BLOCKS

Distributed by

PITTSBURGH PLATE GLASS COMPANY

and by W. P. Fuller & Co. on the Pacific Coast

Pittsburgh Corning Corporation
2158-1 Grant Bldg., Pittsburgh, Pa.

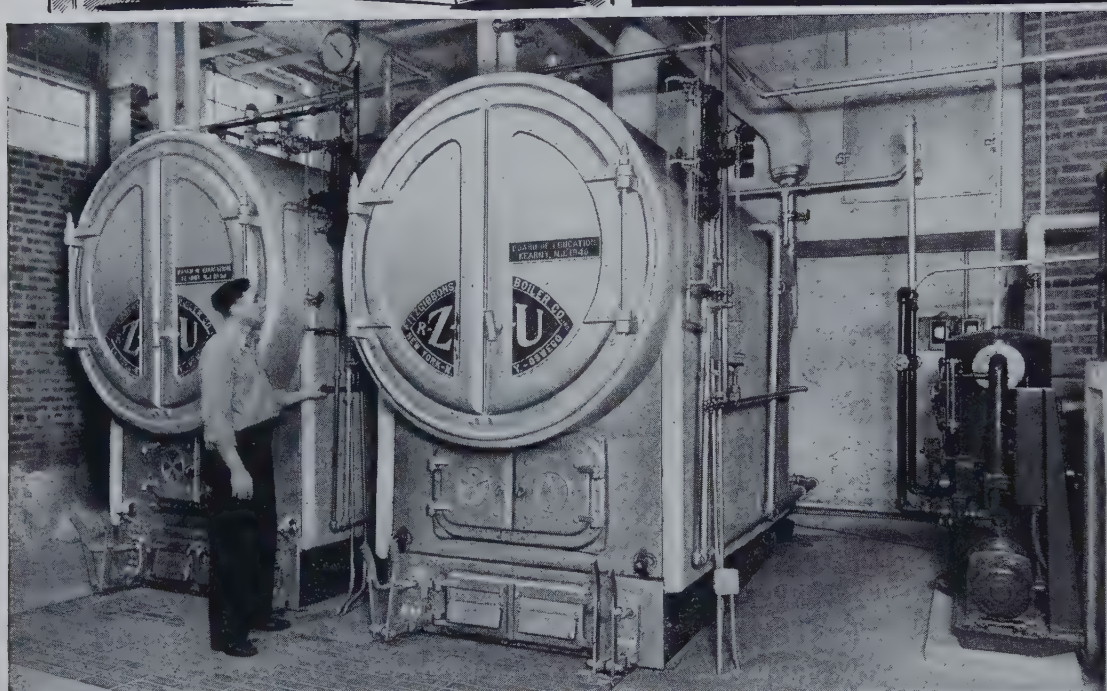
Please send me, without obligation, your free, illustrated booklet about the use of PC Glass Blocks in ☐ factories ☐ commercial and public buildings.

(Be sure to indicate type of building)

Name

Address

City State



A Lesson in Economy

at the McKinley School, Kearny, New Jersey.

Consulting Engineers, O. Vogelbach & Associates, Newark, N. J., for Board of Education, Kearny, N. J.

Heating Contractor, Thomas H. Branch & Son, 91 Forest Street, Kearny, N. J.

ONLY ONE FIRING PER DAY at the McKinley School Kearny, N. J. — but that keeps 22 school rooms at 70 degrees during school hours, and around 60 degrees the rest of the time. The two sturdy Fitzgibbons R Z U Boilers, with their L. J. Wing Combustion Control,* have proven so efficient that only one boiler at a time was needed during the past winter, even when outdoor temperatures hovered around zero. Low-cost rice anthracite is the fuel, and operating savings since installation a year ago already run into important figures, while the school enjoys an abundance and uniformity of heat that contrasts gratifyingly with the experience of other years.

Just one more of the many installations which prove that the architect or engineer who specifies Fitzgibbons boilers is taking no chances.

A line from you brings full details on Fitzgibbons boilers, and if you so desire, the full cooperation of Fitzgibbons Service to Architects.



*Combustion Control System supplied by the L. J. Wing Manufacturing Company, Newark, N. J.



Fitzgibbons Boiler Company, Inc.

General Offices: 101 Park Avenue, New York, N. Y.
Works: OSWEGO, N. Y. Offices in Principal Cities

4 IMPORTANT REASONS for the **RECORD-BREAKING SUCCESS** of the new J-M AMERICAN COLONIAL ASBESTOS SHINGLE



ARCHITECTS SAY:

"We like their deep texture, beautiful colors and true American Method appearance"

BUILDERS SAY:

"This asbestos strip shingle is self-spacing, easy to lay, cuts application costs to the bone"



DEALERS SAY:

"At their new low prices, American Colonials are a profitable volume item"

HOMEOWNERS SAY:

"They give us fire-safety, long life and low upkeep"



NEVER BEFORE have we seen such an enthusiastic response to a new product! Introduced just a few months ago, the new Johns-Manville *American Colonial* Asbestos Shingle is already sweeping the country.

You should know the reasons why. This new shingle is built to last 30 years* *plus* . . . provides all the fire-safety and low upkeep of asbestos and cement at the lowest price in history for a textured J-M Asbestos Roof! It is available in handsome blended colors that add new beauty and charm to any home. Its texture and graining are those of weathered wood. The new, self-spacing, fast laying design cuts application costs. Combined with new low prices, this feature means that finished roofs with permanent qualities add as little as 50¢ a month to F. H. A. payments on a new home. Send for full-color brochure. Just mail the coupon.

●Orders for the new Johns-Manville American Colonial Shingle have reached unprecedented volume. In addition to the demand for private construction, defense projects have called for thousands of squares.

As a result, delivery may be slower than during normal times. However, production is being speeded up . . . every step is being taken to assure the fastest delivery possible under the present emergency.

**This is an intentional understatement.* Thousands of the very first J-M Asbestos Shingles, applied 30 years ago, are still going strong. No sign that they won't last another 30-40-50-years.

Johns-Manville
AMERICAN COLONIAL
Asbestos Shingles

JOHNS-MANVILLE, Dept. PP-9
22 East 40th Street, New York, N. Y.

Send me a copy of your new full-color brochure on J-M American Colonial Asbestos Shingles. No obligation, of course.

Name _____

Address _____

City _____ State _____



JOHNS-MANVILLE
Asbestos Shingles

There's More To HOME INSULATION Than Sidewalls, Floors and Ceilings



CAREY ROCK WOOL INSULATION—
Sealed Roll Blankets
Granulated Wool
Loose Wool
Bats

The Model 1941 Home
needs all these...
Carey
INSULATION
PRODUCTS

Insulated walls, floors and ceilings are taken for granted. But that's merely the basic requirement of the home of today.

To meet the more specialized needs of the modern home and its equipment, CAREY research has developed outstanding products that insure maximum control of room temperatures . . improve efficiency of air-conditioning systems . . provide fire-proof housing of heating and air-conditioning units . . reduce heat loss from boilers and hot-water piping . . prevent sweating of cold-water pipes, keep cold water cold . . silence running water . . drastically reduce fuel consumption.

Whatever the insulation requirements of your homes and their equipment may be, you can make the job complete in every detail—insure top efficiency—by specifying CAREY Products. Write Dept. 54 for full information, or see Catalog in Sweet's.

The Philip Carey Mfg. Company

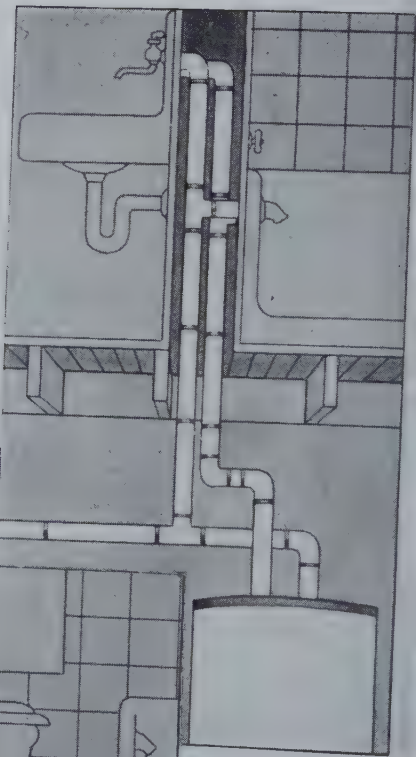
Dependable Products Since 1873

LOCKLAND, CINCINNATI, OHIO

In Canada: The Philip Carey Company, Ltd. Office and Factory: Lennoxville, P. Q.

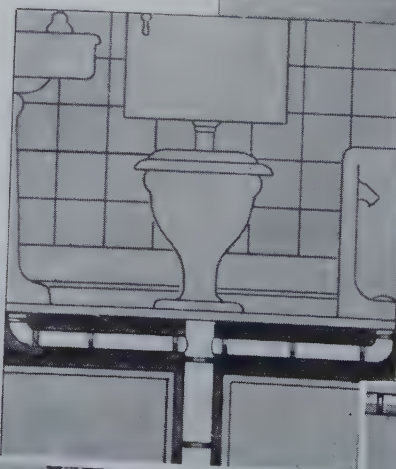
CAREY PERFECTO

—Provides inexpensive insulation for cold water pipes and gives fair results in preventing sweating or freezing.



CAREY IMPERVO

—Superior anti-sweat covering for cold water pipe—prevents sweating—keeps water cold.



HOT WATER TANK JACKETS
—Made of CAREY-CEL asbestos insulation.



CAREY DUCT

The all-asbestos prefabricated duct for conveying conditioned air, either hot or cold. Duct and insulation both in one—a natural sound absorber—hushes noise—allows higher velocities—costs no more than insulated metal duct, yet vastly superior.



CAREY CEL

Ideal insulation for boilers, hot water pipe—rate of heat loss 30% less than through equal thickness of ordinary Air Cell . . . highly efficient, low in cost.



CAREY FIREFOIL PANEL—For heating and air-conditioning housings—strong, rigid, fireproof, waterproof.

6 ALUMINUM, DEFENSE, AND YOU



DEFENSE ISN'T JUST AIRPLANES!

They are first in the hearts of the people and first in the headlines. But Defense is also ten thousand other military necessities, clear across the board, and Alcoa Aluminum goes all the way across with it.

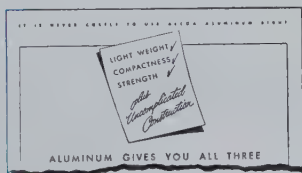
Sheets and shapes and wire; castings and extrusions and forgings, nuts and bolts and tubing and rivets; all these and more forms of Alcoa Aluminum are being chewed up by scores of industries in military applications as varied as the peace-time applications of aluminum used to be.

AND FOR THE SAME REASONS.

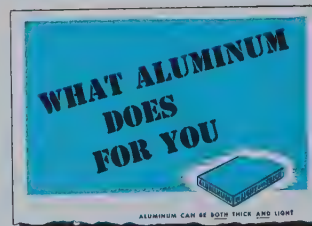
Before Defense, one of our advertisements to civilians started off with the headline reproduced at the right. A whole volume of economic and engineering common sense was distilled into those six words. Now, Defense is taking all the aluminum we can make because that headline is a fact.



THIS IS WHAT we were saying, *Before Defense*, to prospective buyers of Diesel engines. A great new industry was feeling its way. Properly, it was weighing the advantages of using Alcoa Aluminum. But Defense had to have those advantages right away, and civilian users of Diesels now have to wait for their aluminum.



THE FIVE WORDS in the headline of this advertisement (B.D.) at the right introduced straight talk about the fundamentals of weight saving with Alcoa Aluminum: vital reasons we thought (and think) that everybody should know. Defense hasn't time to explain that these are precisely its reasons for using aluminum; it just takes all it can get.



LAST MONTH DEFENSE TOOK over 50 million pounds of Alcoa Aluminum, for the simple and clear reason that certain advantages of aluminum are fundamental.

When the emergency is over, Alcoa is going to be talking the same simple language, selling the same fundamentals. And it will have still better techniques and new uses of Alloys of Alcoa Aluminum for you to put to work.

RIGHT NOW, we are in high gear for defense; our foot is on the floor board; we intend to keep it there for the duration.

ALUMINUM COMPANY OF AMERICA

The individual Long-Span Steel Joists are delivered to the job as shown at the left and are then quickly welded in position to form a smooth floor deck as shown below.

**SPEED
FOR
DEFENSE**

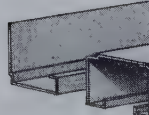
CALLS FOR



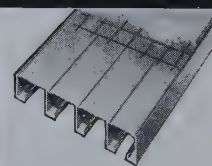
LONG-SPAN STEEL FLOOR AND ROOF SYSTEM

TO HASTEN the construction of new plants and additions for America's defense industries, architects are making extensive use of Wheeling Long-Span Steel Floor and Roof System. This improved system of building floors, ramps, and roof decks, eliminates lengthy delays. The prefabricated COP-R-LOY joists can be erected in minutes instead of days. A crew of six welders can finish approximately 1,000 square feet an hour. While they are completing their work, electricians, plumbers, bricklayers, and other tradesmen can start roughing in on the portion of the deck already completed. This kind of speed is accomplished without waste. There is no chance of wrong assembly. There is no cutting on the job. The joists are delivered the correct size and are designed so that correct assembly does not depend on the skill of the workmen. Write for details.

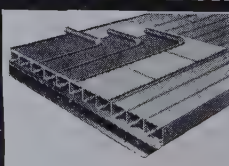
**LONG SPAN
STEEL
JOISTS**



WELDED INTO A RIGID DECK



**FOR ANY TYPE
OF FLOORING**



**OR BUILT-UP
ROOFING**

WHEELING CORRUGATING CO.

General Offices: WHEELING, WEST VIRGINIA

OFFICES AND WAREHOUSES IN PRINCIPAL CITIES

The New



KLAMPSWITCHFUZ SWITCHBOARD

Dead Front—Dependable—Medium Priced

In this new switchboard, exceptional design, quality and satisfactory service are combined with moderate cost. Due to its sectional construction, grouping of switches of any required capacities is possible. Two or more of these units may be placed side by side, if desired, to build up a larger center of distribution.

The following Advantages are incorporated in the FA Klampswitchfuz units which comprise these switchboards:

1. Dead front—covered contacts.
2. Contacts are silver plated, insuring low resistance.
3. Extended feeders—this eliminates tangle of cables in rear.
4. New and improved FA solderless lugs.
5. Clamp type fuse holders—low resistance, minimum heating.
6. Easy to replace fuses—fuses are mounted on door.
7. ON and OFF position indicator.
8. Horsepower rated.
9. Sectional, cubical construction—uniform appearance.
10. Pleasing design—pearl gray lacquer finish—easy to keep clean.
11. Integral pullbox.
12. Easy and economical to install and connect.

Front view of FA Klampswitchfuz Switchboard, with 2—60 amp., 2—100 amp., 2—200 amp. and 1—400 amp. Klampswitchfuz Switches.

Capacities: 30 to 1200 amp., 250 volt DC and AC; 30 to 600 amp., 575 volt AC; in 2, 3 and 4 pole types.

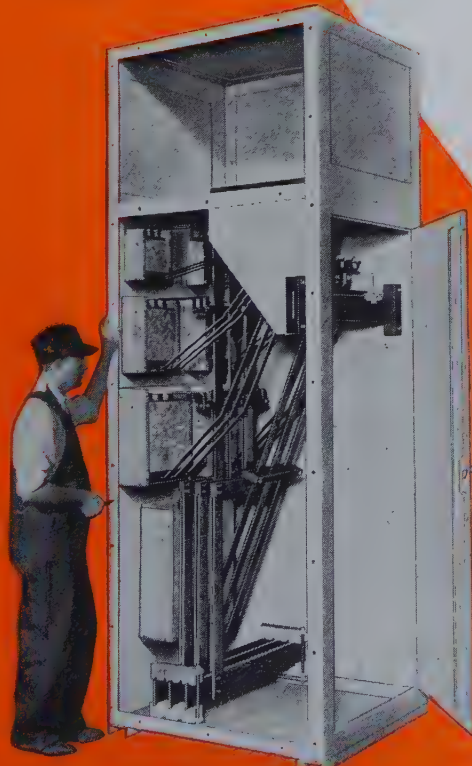
In New and Modernized Plants

this, and these other FA Products will serve faithfully and well: Feeder Busduct . . . Plugin Busduct . . . Shutbrak Safety Switches . . . Power and Light Distribution Panelboards (Standard and Column Types).

FA Sales-Engineers Can Help You

Their long experience and training are at your service—without obligation. Write for the name and address of the one nearest you. And ask for complete catalog information . . . Frank Adam Electric Company, St. Louis, Mo.

Side and rear view of above, showing integral pullbox and arrangement of copper busbars



*The Best of
WELL-LAID PLANS
depend on*

STREAMLINE

TRADE MARK REG. U. S. PAT. OFFICE

COPPER PIPE AND Solder FITTINGS

● The arteries of any building are its plumbing or heating conducting system. Upon their perfect operation depends the maintenance of comfort and convenience in living conditions that any home owner or tenant has the right to expect. The handsome and ultra modern bathroom and kitchen fixtures so much in vogue today can only reach their maximum efficiency if the service they render is in keeping with their design. Their smooth, trouble-free operation must not be impaired by rust-stained, slow running water, and leaking pipe supply lines.

A BUILDING MAY BE YOUNG IN APPEARANCE, BOTH INSIDE AND OUT—BUT WOEFULLY ANCIENT IN ACTUAL LIVING CONVENIENCE. ANY HOME IS, AFTER ALL, AS YOUNG AS ITS ARTERIES—ITS CONDUCTING SYSTEM.

A radiator may be the last word in design, but if installed with a piping system that, in a few years, rusts and leaks, it will fail in its function as an efficient heating unit.

An efficient, convenient and comfortable home depends upon well laid plans and the best of well laid plans should include STREAMLINE Copper Pipe and Solder Fittings for the plumbing and heating systems.

A catalog of STREAMLINE products is already on file in your office. You will find it in Sweet's.

CO—PORT HURON MICH—STREAMLINE—HARD—GOVT—TYPE M—

STREAMLINE
PIPE AND FITTINGS DIVISION
MUELLER BRASS CO.
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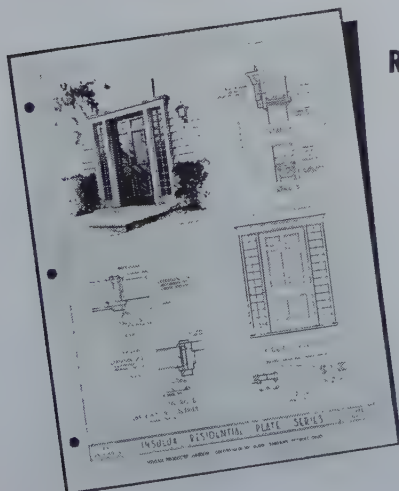


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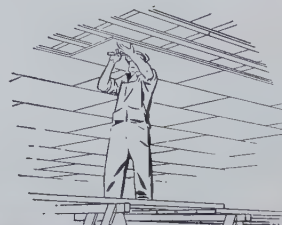
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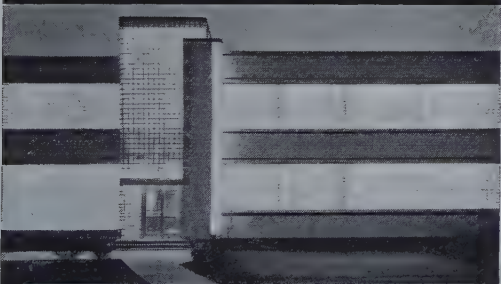
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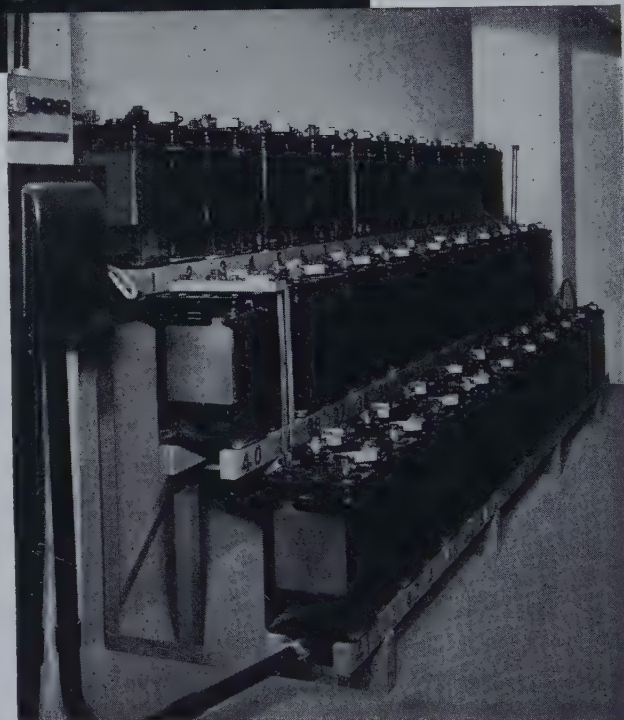
New auditorium of Indiana University, Bloomington, Indiana, A. M. Strauss, Fort Wayne and Eggers and Higgins, New York, Architects. Seating capacity of the building is 5000. All important areas are protected by Exide Emergency Lighting.

DEDICATED last March, the new \$1,170,000 Music Hall-Auditorium of Indiana University at Bloomington, Indiana, includes such noteworthy features as a lobby lined with murals by Thomas Hart Benton, an auditorium and a theatre which are interconnected through the stage—and an Exide Emergency Lighting System of ample capacity to protect the entire auditorium, stage, stairway, rest rooms and all exit lights.

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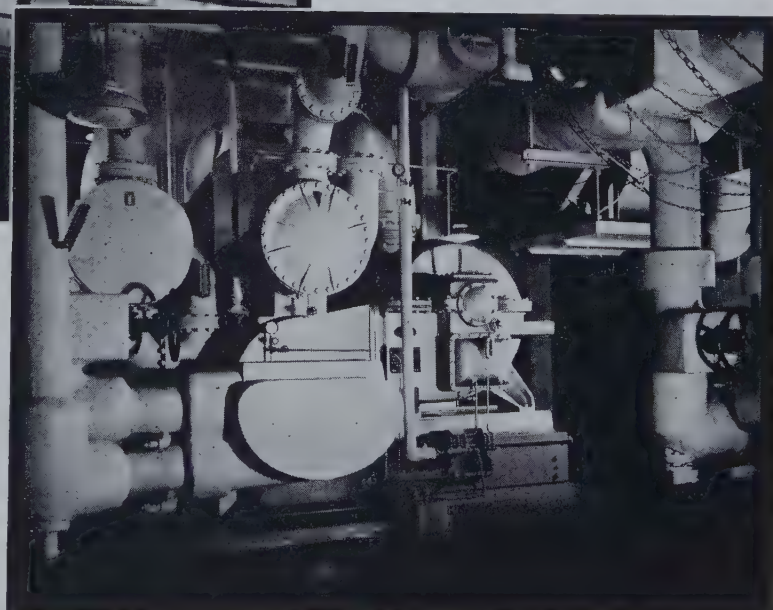
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a field of Spanish Red, interlined with strips of Sea Green Marble and crossover blocks of Black. U. F. Durner Company was the flooring contractor. Architects were Kirchoff and Rose, Milwaukee.

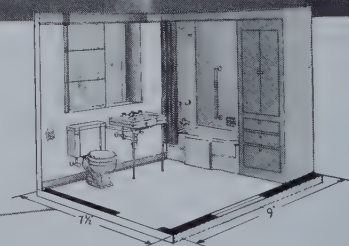
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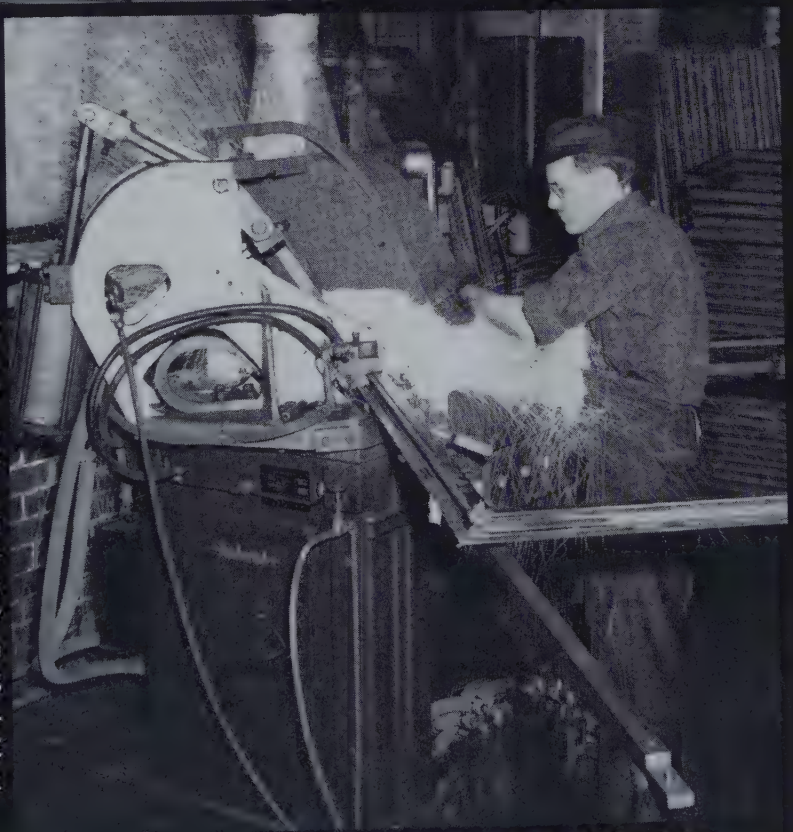
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ABOVE: THE OPERATION OF CLOSING A LOK'D BAR INTERSECTING JOINT IN THE COMPRESSED AIR PRESS. AN ENORMOUSLY STRONG JOINT RESULTS.

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Send for HOPE'S Publication No. 76 (June, 1941) which gives complete detailed description.

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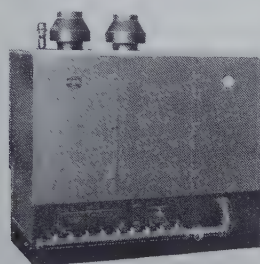


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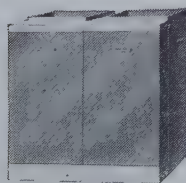
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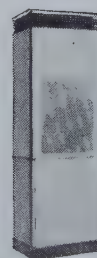
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VOLUME XXII NUMBER 9 SEPTEMBER, 1941

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PENCIL POINTS

KENNETH REID, EDITOR, CHARLES
MAGRUDER, MANAGING EDITOR
DON GRAF, TECHNICAL EDITOR

THE MONOGRAPH SERIES
RUSSELL F. WHITEHEAD, EDITOR

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IN THIS ISSUE

Harry Sternfeld, Architect, of Philadelphia, who was associated with *The Ballinger Company* in the design of the Philadelphia Court House and Post Office presented in this issue, has contributed many important buildings to Pennsylvania in his career as a practicing architect, since 1922, and also has served the cause of Architecture as a Professor of Design in the School of Fine Arts, University of Pennsylvania, since 1923. He is interested in town planning as well and has developed master plans for a number of communities. He was engaged for six years as City Planner for Rome, New York, in preparing a master plan anticipating the future parks, traffic, and building requirements of that city.

Nationally known both as an architect and an educator, Mr. Sternfeld received his education in the Philadelphia schools and graduated in 1911 from the University of Pennsylvania with the degree of B.S. of Arch.—receiving his M.S. in Arch. in 1914, the same year that he won the Paris Prize of the Beaux-Arts Institute of Design in New York. He attended the Ecole des Beaux-Arts in Paris, 1919-1920, and the following year was a Visiting Fellow at the American Academy in Rome. Returning to America, he took up the duties of Professor of Architecture and Head of the Department of Architecture at Carnegie Institute of Technology until 1923.

He has won a number of professional honors including the prize in the national competition in 1932 for a United States Memorial at Appomattox, Virginia, in which he collaborated with *J. Roy Carroll, Jr.*, Associate, and *Gaetano Cecere*, Sculptor; and awards in 1934 and 1935 given in Philadelphia by the Better Homes in America Association for "Best Reconstruction of a Dwelling at Moderate Cost." Mr. Sternfeld's professional achievements include the United States War Memorial at Audenarde, Belgium; the Slovak Girls' Academy at Danville, Pennsylvania, (*B. E. Starr*, Architect, of Harrisburg, Associate); the United States Post Office at Milton, Pennsylvania; the Headquarters building and War Department School at Fort Monmouth, New Jersey; and most recently, the Philadelphia Court House and Post Office. Mr. Stern-

feld's practice includes considerable residential work; and he recently has been associated with *Mr. Edward H. Wigham* on an important Housing Project for the USHA in Philadelphia.

The Ballinger Company has been in practice in Philadelphia for 40 years and is well known for the important buildings it has designed, including club and fraternity buildings, hospitals, institutional buildings, public schools, church and religious buildings and apartments and hotels in various cities.

In New York City, *The Ballinger Company's* work includes the Club Building for Queensboro Elks, for which they were awarded first prize for architectural design. Outstanding among their hospital and institutional buildings are the General Hospital at York, Pennsylvania, and the Home for Incurables in Philadelphia, each erected at a cost exceeding \$1,000,000. In Washington, D. C., their work includes the Methodist Headquarters Building located near the Capitol. Among their educational buildings are Woodbury Public School in New Jersey and the Western Theological Seminary in Pittsburgh, Pennsylvania. Over thirty church and religious buildings are included in their work. Apartments and hotels designed by them include Town Hall and Embassy Apartments and Robert Morris Hotel in Philadelphia.

Howard Lovewell Cheney, Architect, of Chicago, and Consulting Architect for P.B.A., has designed a large number of important buildings in many parts of the country. His Gary and Peoria Federal Buildings in this issue are representative of his practice in the field of public work. He is also engaged in residential, commercial, industrial, and airport design. His professional record includes activities as Architectural Adviser for the Tribune Tower, Chicago; Supervising Architect, LaSalle Wacker Tower, Chicago; member of architectural staff of "A Century of Progress," Chicago; architect of United States Building and Court of Peace, New York World Fair; architect of Federal Buildings in Chicago, Detroit, Gary, Marion (Indiana), Milwaukee, New Orleans, Charleston (West Virginia), Miami Beach and Panama City (Florida); architect

of Washington National Airport; consulting architect for important aeronautic projects and architectural services for airlines.

* * *

The murals shown on pages 587-590 were painted for Lever Brothers Company by *Francis Scott Bradford* of Cornwall Bridge, Connecticut, a distinguished artist whose work in this field has included 24 panels for Milwaukee Court House; panels for the Court House at Appleton, Wisconsin; 10 murals, "History of Chemistry," for Hooker Electrochemical Company; a map for International Telephone & Telegraph; 10 pictures for the New York World's Fair, and various private commissions.

* * *

The technical article in this issue on "Fluorescent Lighting," is by *John T. Bailey*, who has been for the past 3 years Chairman of the Illuminating Engineering Society's Committee on light in architecture and decoration. His educational background includes degrees in Electrical Engineering and Architectural Engineering from the University of Minnesota, supplemented by 6 years experience in designing lighting systems for projects ranging from ball parks to fairs. He is now Lighting Engineer for the *W. T. Grant Company* and establishes lighting policies for this department store chain.

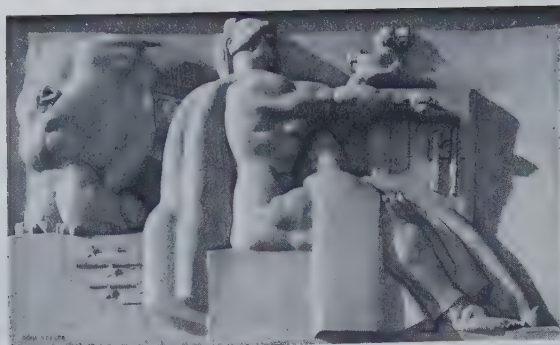
* * *

The article, "Getting Down To Business," by *Hal Burnett*, Chicago Public Relations Consultant, is written from a wide experience as specialist in the publicity problems of the architectural as well as related fields. Burnett numbers among his clients such important firms as *Holabird & Root*, *Perkins, Wheeler & Will*, *James F. Eppenstein & Associates*, *Pereira & Pereira*, *Ralph Staetzl*, *L. R. Solomon & Associates*, and *A. Dudley Kelly* (Interior Designer). Following graduation from the University of Illinois, Burnett studied architecture at the Chicago Art Institute and Armour Institute of Technology before taking graduate work in advertising at Northwestern University. For 6 years he was Director of Public Relations for the Chicago office of C.B.S. and was in charge of all publicity activities at "A Century of Progress Exposition."



Photos by Samuel H. Gottscho

CHESTNUT STREET ENTRANCE TO COURTROOMS
U. S. COURT HOUSE AND POST OFFICE BUILDING — PHILADELPHIA



PHILADELPHIA

AND POST

THE BALLINGER COMPANY AND

Seven years ago, in May, 1934, we were privileged to publish the early drawings for the United States Court House and Post Office at Philadelphia, Pennsylvania, designed by The Ballinger Company and Harry Sternfeld, Associate Architects. In the intervening years the original design, having undergone a certain amount of revision, has been carried out so that it is possible to present herewith a photographic record of the completed structure, which is one of the major items of the Federal public building program.

The site is on Ninth Street, extending the full length of the block between Market and Chestnut Streets. Here, in a structure containing six main stories and a basement, are housed the William Penn Annex Post Office sub-station, facilities for the United States Department of Justice, and offices for miscellaneous Federal departments.

The Post Office occupies most of the first floor, all of a mezzanine floor, and a small portion of the second floor. Its public lobby is reached by four entrances on Ninth Street along which it extends the full length of the block. It may also be reached from the main entrance lobbies on Market and Chestnut Streets. The plan on page 562 shows the disposition of the working space. The mailing platform to the west is served from a government-owned alley leading into both Market Street and Tenth Street.

The Department of Justice occupies the entire second floor, which is accessible from elevator lobbies at both ends of the building. The excellent arrangement of its court rooms is worth special mention. The United States

District Courts, the Court of Appeals, and the Library are completely insulated by lobbies and corridors from the surrounding office spaces and judges' chambers, which are placed against exterior walls. The courts are thus shielded from any distracting street noises. They are also, incidentally, acoustically treated to insure quietness, so that speech at normal voice may be heard distinctly in any part of the rooms. The wide public corridor gives ample access to all courts through foyers so arranged that entrance cannot be made upon axes, thus preventing those using the judges' rostrum from having their attention distracted by movement in or out. A narrower private corridor, for the use of the judges and their assistants, extends along the west side of the floor between the court rooms and the judges' chambers. Jury rooms, witness rooms, conference rooms, and the offices (on the third floor) of the District Attorney and the Assistant District Attorneys may all be reached through private corridors and stairs, so that those concerned with the proceedings can perform their duties without coming in contact with the public. Prisoners are brought in through a special entrance on the service side of the building and are taken to the U. S. Marshal's office from the basement by means of a special elevator. The well-equipped library with its accessories forms a compact unit easily reached from either public or private corridor.

Additional space for other activities under the Department of Justice are placed on the third and fourth floors. A private mezzanine above the second floor contains filing

COURT HOUSE OFFICE



HARRY STERNFELD, ARCHITECTS

rooms for case records, models, and so on. The remaining space, above the fourth floor, is allotted to other Federal departments, and may be reached by elevators or stairs from the main entrance and service lobbies. Among the departmental activities housed here are Internal Revenue, Labor, Narcotics, and Secret Service.

All public lobbies and vestibules are lined or treated with Georgia marble of a warm pinkish color. The ceilings of these spaces are plaster, vaulted or coffered as may be seen in the photographs, and their floors are of two-tone terrazzo, inlaid with wide brass strips, patterns, and inserts. The specially designed ornamental work found in the doors, heating and ventilating grilles, and lighting fixtures is of bronze, aluminum, or white metal. Interiors in the court rooms, law library, and judges' chambers are lined or panelled with Western red cedar and American black walnut. The floors here are of a fine-grade, inlaid, cork tile to insure quiet. Ceilings are of Western red cedar, plaster, and acoustic tile, specially designed to insure proper acoustical results, as well as to reflect and diffuse the light. Materials of the exterior are noted in the captions under the illustrations.

As is appropriate in a building of this kind, carved and sculptured details symbolic of its purposes adorn its exterior. On the Ninth Street façade the seals of the original thirteen States, together with inscriptions concerning the courts and the law are carved in the limestone facing. The crowning frieze is treated with lictor bands (traditional emblems of the Court) and carry simple carved

panels symbolizing the three States of Delaware, New Jersey, and Pennsylvania, which comprise this particular court circuit. The important carved sculptures flanking the main entrances on Chestnut and Market Street (illustrated above on these two pages) were the work of Donald De Lue, of New York, while those at the two principal entrances on Ninth Street were by Edmond Amateis, of Brewster, New York. The various State and Departmental seals found at a number of points in and upon the building are by Louis Milione, of Philadelphia.

The limited budget fixed by the appropriation for the project made the inclusion of the many diverse activities called for in the program of requirements a challenge to the planning skill of the designers. In addition to solving the planning problems, the architects endeavored to express these requirements frankly and economically with a recall of the spirit characteristic of our fine traditional examples. They have expressed the hope that as a result of the careful study given to proportions, choice of materials, and the use of sculptural decoration, the building will be found to be an appropriate expression of the monumental power of our great Nation and that it will be independent of changing tastes or styles for some time to come. How far they have succeeded will be determined by the judgment of their contemporaries and of the public. It seems to us fair to say that it merits a place among the finest public buildings produced by this generation of architects in the United States. As such we commend it to you for study and examination.



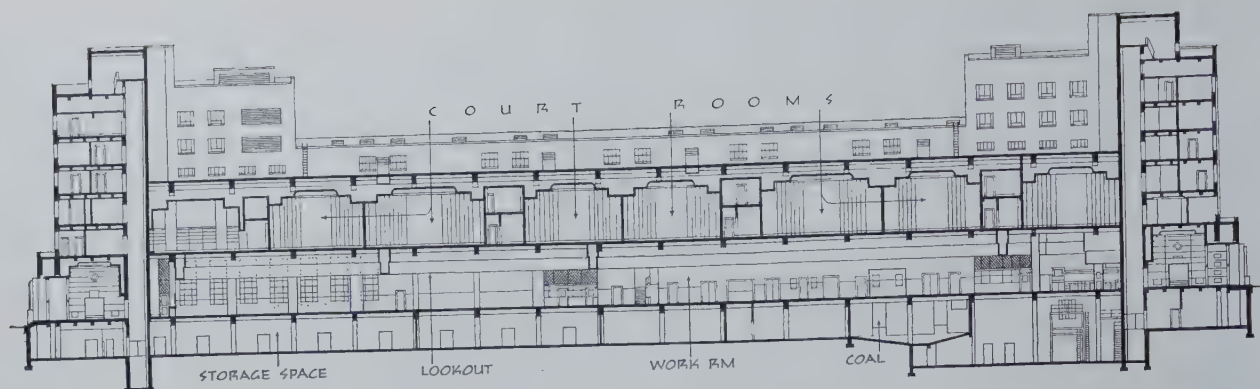
VIEW ABOVE SHOWS THE NINTH STREET FACADE (LEFT) AND THE MARKET STREET (OR NORTH) FACADE





THE POST OFFICE LOBBY (ABOVE) EXTENDS THE LENGTH OF THE NINTH STREET SIDE OF THE BUILDING AT EITHER END OF THE LOBBY, PASSAGES (DETAIL PHOTO AT RIGHT) LEAD TO THE LOBBIES GIVING ACCESS TO THE COURTROOMS (SEE PAGE 563). THE FOUR ENTRANCES TO THE BUILDING ARE FLANKED BY GRANITE BAS-RELIEFS. THOSE AT EITHER END (SEE DETAILS ON PAGES 558 AND 559) AS WELL AS THE MARBLE BAS-RELIEFS IN THE TWO COURT HOUSE LOBBIES ARE THE WORK OF DONALD DE LUE, OF NEW YORK. THE EXTERIOR SCULPTURES SYMBOLIZE "LAW" AND "JUSTICE." THE SCULPTURE DECORATING EACH LOBBY CONSISTS OF AN EAGLE AND HISTORIC SEALS. THE SCULPTOR OF THE GRANITE BAS-RELIEFS AT THE POST OFFICE ENTRANCES, REPRESENTING "POSTAL ACTIVITIES IN THE VARIOUS REGIONS OF THE UNITED STATES" (DETAIL PHOTO ACROSS-PAGE), WAS EDMOND AMATEIS, OF BREWSTER, NEW YORK. THE OTHER ARCHITECTURAL SCULPTURE—STATE AND DEPARTMENTAL SEALS—IS THE WORK OF LOUIS MILIONE, OF PHILADELPHIA. MATERIALS NATIVE TO AMERICA WERE SELECTED BY THE ARCHITECT FOR THIS FEDERAL BUILDING. THE EXTERIOR IS FACED WITH INDIANA LIMESTONE ABOVE A BASE COURSE OF MILFORD PINK GRANITE AND THE WEST SIDE OF THE BUILDING, ON THE SERVICE ALLEY, IS FACED WITH GRAY BRICK SELECTED TO HARMONIZE WITH THE LIMESTONE. BRONZE FRAMES, SASH, AND DOORS WERE USED. ABOVE EACH OF THE MAIN ENTRANCES IS A LARGE BRONZE PLAQUE BEARING THE GREAT SEAL OF THE UNITED STATES AND FEDERAL DEPARTMENTAL SEALS. WINDOWS ABOVE THE FIRST STORY HAVE SPANDRELS OF ALUMINUM AND STEEL



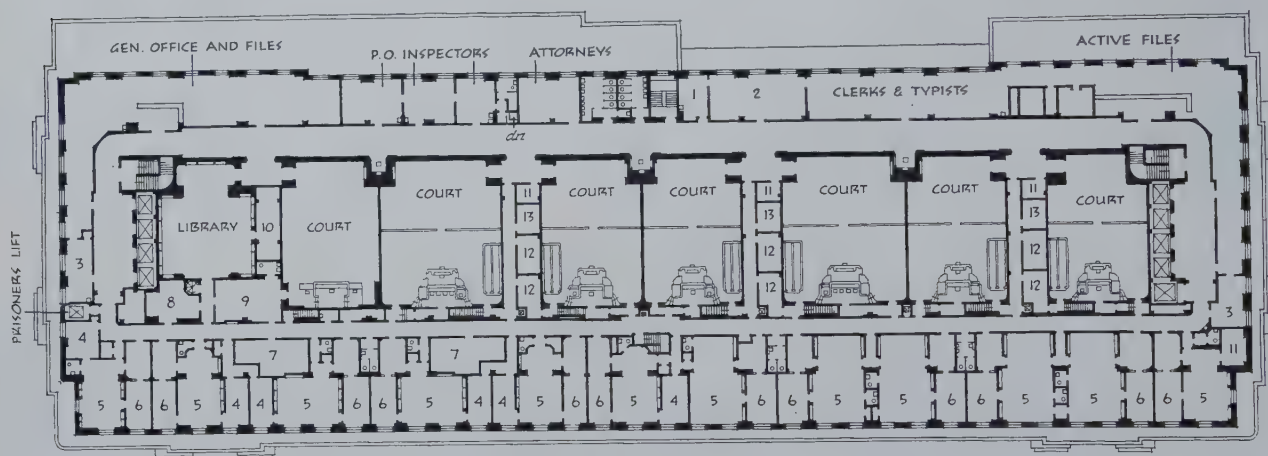


LONGITUDINAL SECTION

THE SECTION ABOVE CLEARLY INDICATES THE DESIGN SCHEME OF THE BUILDING; COURTROOMS AND LAW LIBRARY GROUPED IN THE CENTER OF THE BUILDING, LEAVING ALL SIDES AVAILABLE FOR OFFICES AND OTHER SERVICES. A COMBINATION OF TOP-LIGHTING AND WINDOW LIGHTING WAS THUS EVOLVED. BY MEANS OF AIR CONDITIONING AND CONTROLLED ILLUMINATION AND TEMPERATURE, WORKING CONDITIONS IN THE COURTROOMS CAN BE KEPT UNIFORM AT ANY SEASON OR ANY HOUR OF DAY

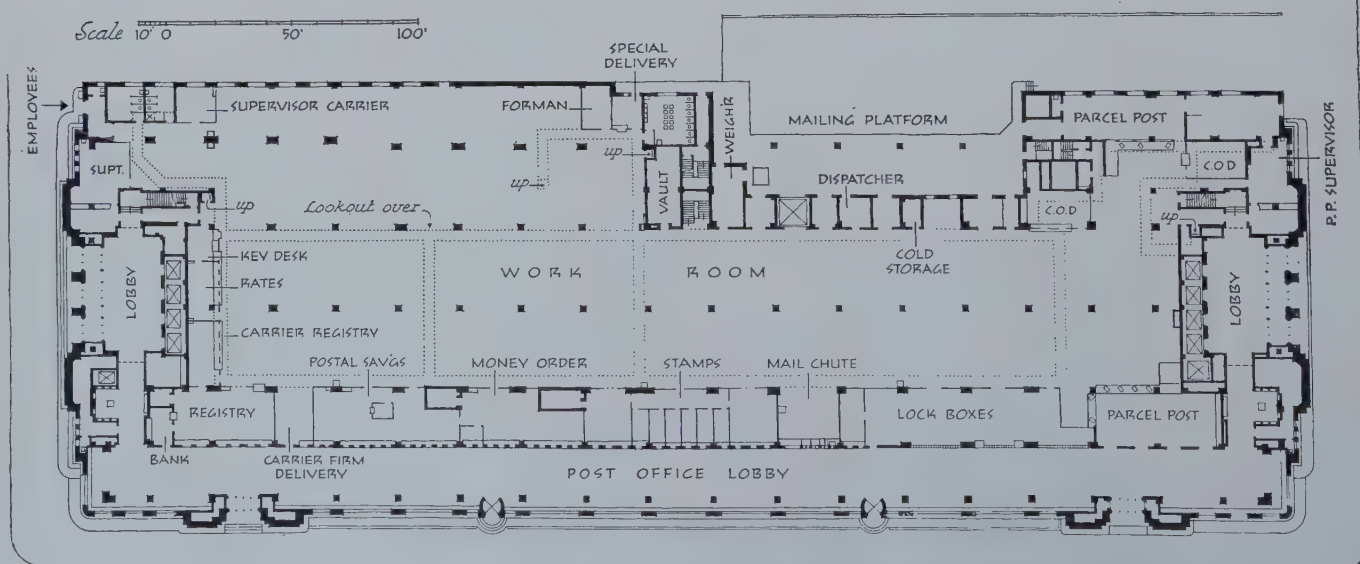
SECOND FLOOR (COURTROOMS)

- | | | | | |
|--------------------------|-------------------|--------------|------------------|--------------|
| 1 PASSPORT CLERK | 4 LAW CLERK | 7 FILES | 10 PACKING RM | 13 REPORTERS |
| 2 DUPLICATING & SUPPLIES | 5 JUDGE'S CHAMBER | 8 LIBRARIAN | 11 CONFERENCE RM | |
| 3 PRIVATE OFFICE | 6 SECRETARY | 9 ROBBING RM | 12 WITNESS RM | |



FIRST FLOOR (POST OFFICE)

Scale 10' 0" 50' 100'





THE MARKET STREET LOBBY GIVING ACCESS TO THE COURTROOMS IS SHOWN ABOVE. NOTE THE TRADITIONAL FASCES IN THE MARBLE FLOOR



U. S. COURT HOUSE AND POST OFFICE BUILDING — PHILADELPHIA



ONE OF THE ELEVATOR LOBBIES ON THE SECOND FLOOR IS SHOWN ABOVE AND THE VIEW BELOW IS IN THE CORRIDOR SERVING THE COURTROOMS, LOOKING TOWARD THE PORTAL OF THE LAW LIBRARY (LEFT) AND THE TURNING OF THE CORRIDOR AT THE ENTRANCE TO THE ELEVATOR LOBBY AT THE SOUTH END OF THE BUILDING. THE LIGHTING FIXTURES ARE OF BRONZE, ALUMINUM, OR WHITE METAL



U. S. COURT HOUSE AND POST OFFICE BUILDING — PHILADELPHIA



COURTROOMS ARE PANELLED IN WALNUT AND CEDAR

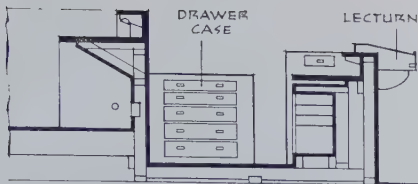
U. S. COURT HOUSE AND POST OFFICE BUILDING — PHILADELPHIA



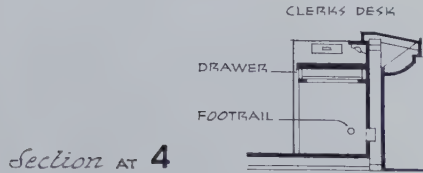
DISTRICT COURT NO. FOUR (ABOVE) AND THE LEGAL LIBRARY (BELOW) ARE ACOUSTICALLY TREATED



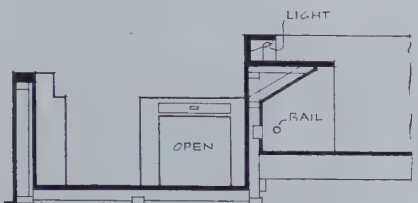
U. S. COURT HOUSE AND POST OFFICE BUILDING — PHILADELPHIA



Section AT 3



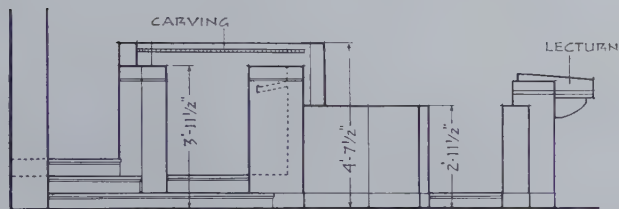
Section AT 4



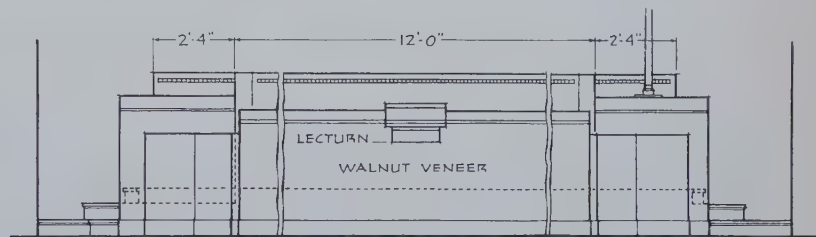
Section AT 5



SAMUEL H. GOTTSCHO

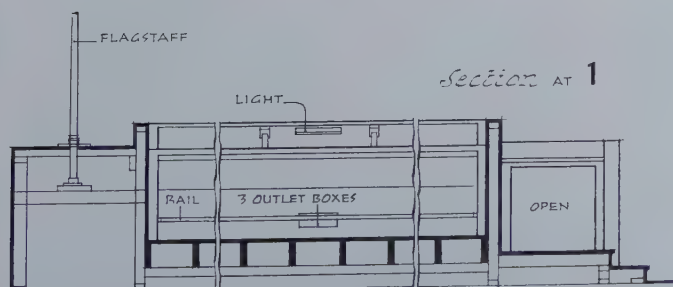
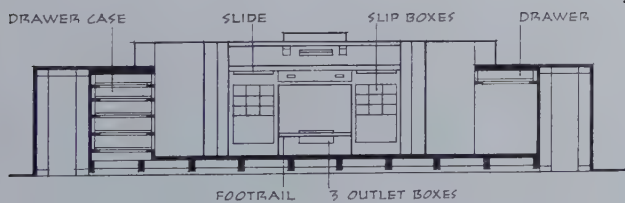


Side Elevation

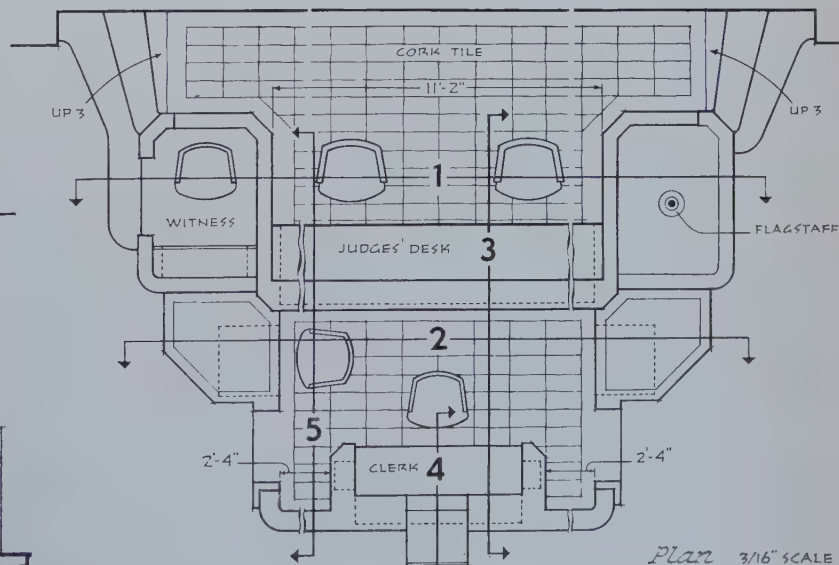


Front Elevation

Section AT 2



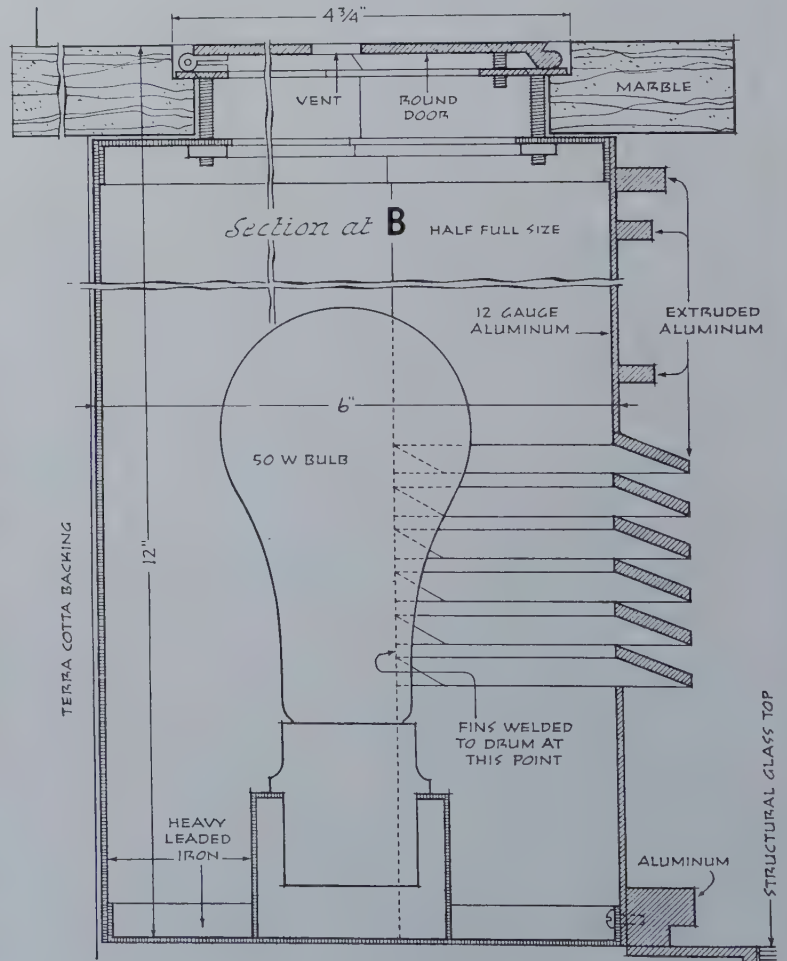
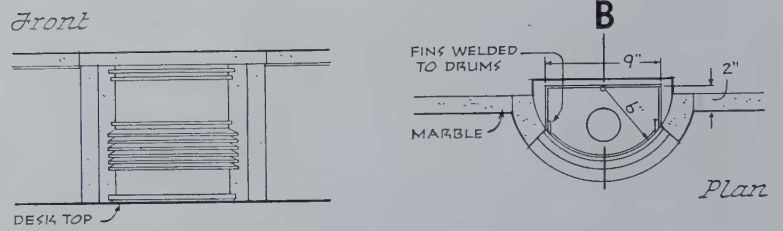
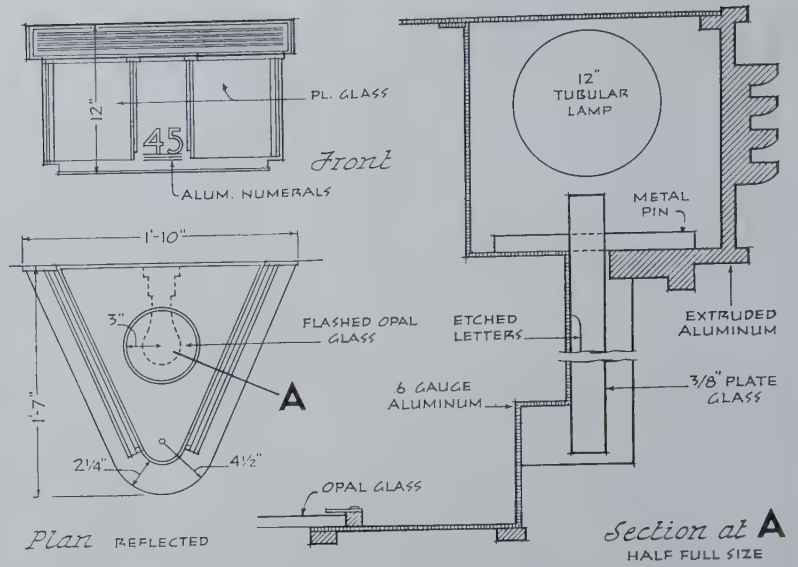
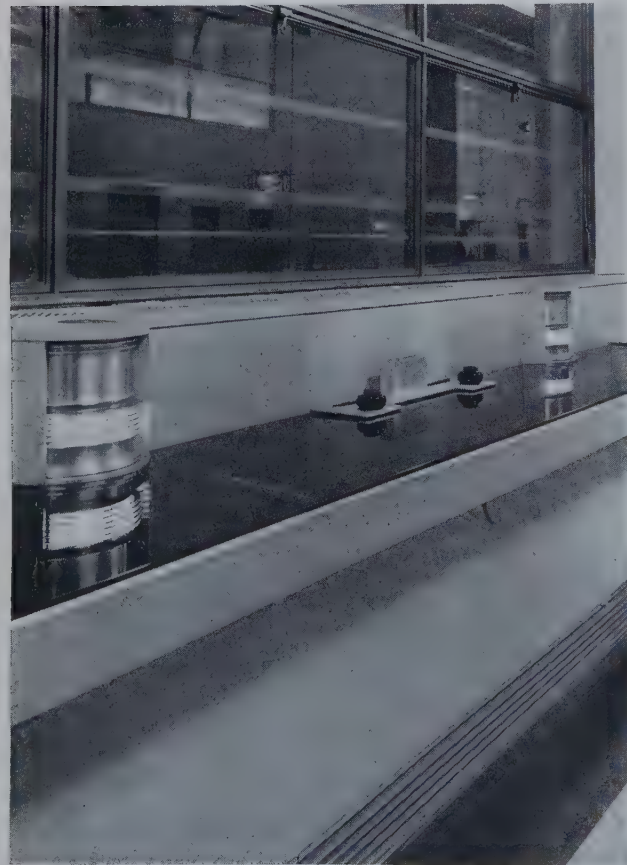
Section AT 1



Plan 3/16" SCALE



Photos by SAMUEL H. GOTTSCHO





THE CIRCUIT COURT OF APPEALS (ABOVE) IS ENTERED THROUGH A SMALL RECESSED FOYER (BELOW)



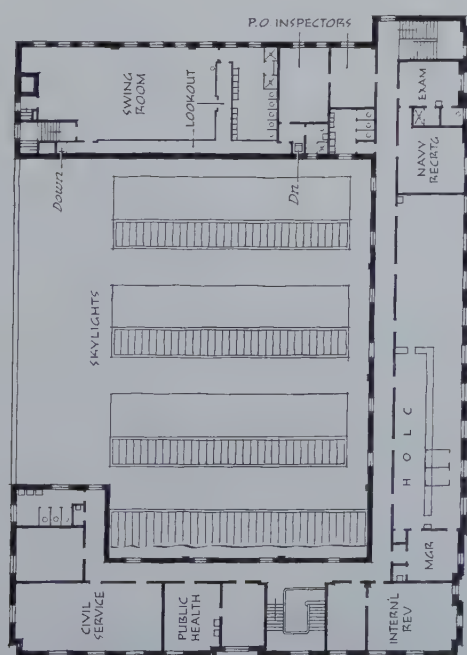
U. S. COURT HOUSE AND POST OFFICE BUILDING — PHILADELPHIA



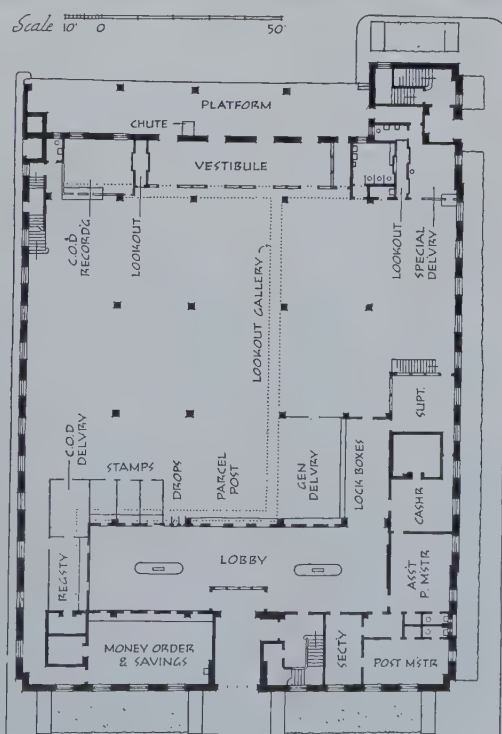
THE JUDGES' CHAMBERS ARE HANDSOMELY FITTED, SOME HAVE READING ALCOVES
U. S. COURT HOUSE AND POST OFFICE BUILDING — PHILADELPHIA



Photos by Hedrich-Blessing Studio



SECOND FLOOR

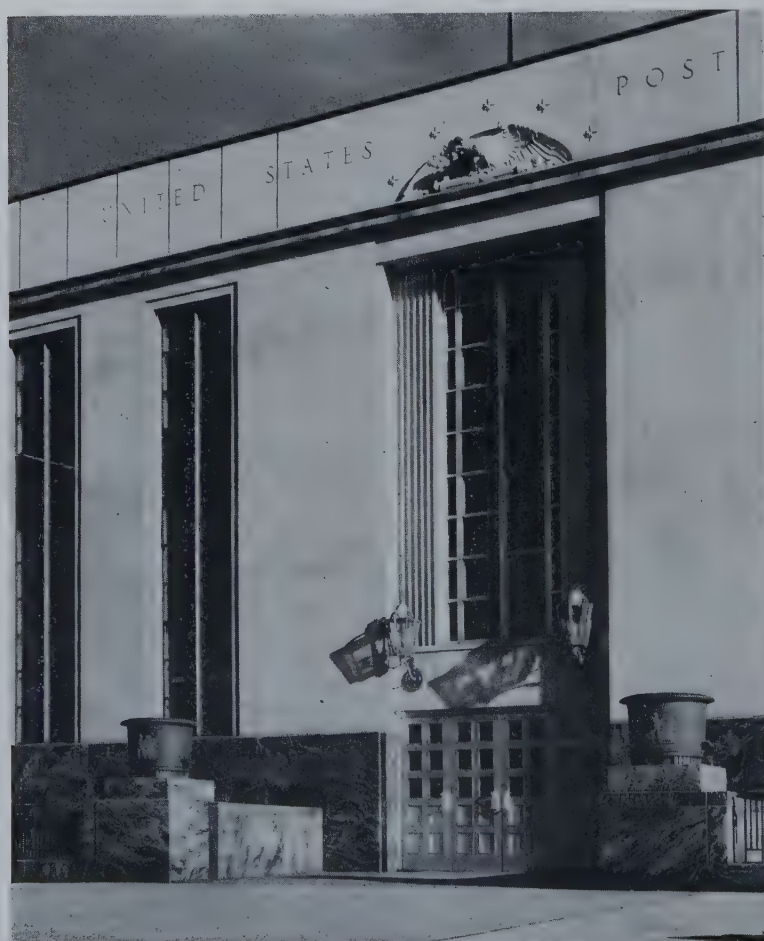


FIRST FLOOR

U. S. POST OFFICE AND OFFICE BUILDING — GARY, INDIANA



ENTRANCE TO THE POST OFFICE LOBBY IS THROUGH A DEEP VESTIBULE, FROM WHICH THE FEDERAL



BUILDING STAIRWELL ALSO OPENS. A GLASS PANEL SCREEN AT THE END ACCENTS THE POST OFFICE APPROACH. THE GARY POST OFFICE BUILDING IS CONSTRUCTED OF ARCHITECTURAL CONCRETE, WITH EXTERIOR ORNAMENT OF CONCRETE AND A BASE COURSE OF MINNESOTA RAINBOW GRANITE. THE EXTERIOR METAL-WORK (DETAIL PHOTO AT LEFT) IS ALUMINUM. SKYLIGHTS FURNISH NATURAL ILLUMINATION FOR THE POST OFFICE LOBBY AND THE WORK SPACE BEYOND. THIS POST OFFICE AND THE ONE ON THE FOLLOWING PAGES WERE DESIGNED IN THE OFFICE OF THE SUPERVISING ARCHITECT WITH HOWARD LOVEWELL CHENEY, OF CHICAGO AND WASHINGTON, AS CONSULTING ARCHITECT. THE PEORIA POST OFFICE AND COURT HOUSE (ACROSS-PAGE) IS ORNAMENTED WITH SCULPTURED PANELS BY FREEMAN SCHOOLCRAFT, OF CHICAGO. THE BASE COURSE AND CARVED PYLONS AT THE ENTRANCE (DETAIL PHOTO) ARE OF DEERE-ISLE, MAINE, GRANITE



BUFF INDIANA LIMESTONE AND GRANITE BASE WERE USED FOR THE PEORIA BUILDING. METALWORK IS BRONZE

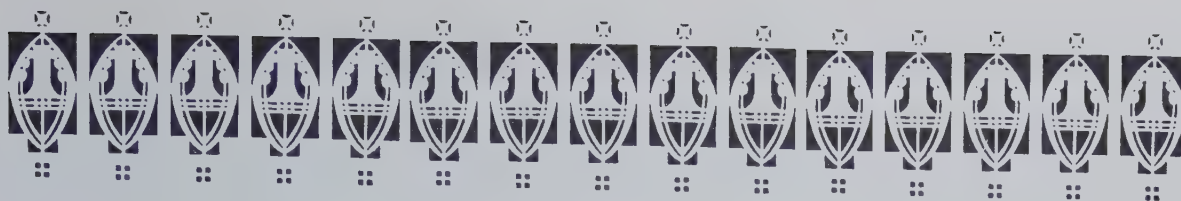




THE RICHNESS OF THE INTERIOR OF THE BUILDING AT PEORIA IS INDICATED BY THESE PHOTOGRAPHS SHOWING THE COURTROOM (ABOVE) AND THE MARBLE LOBBY OF THE POST OFFICE (BELOW). THE POST OFFICE LOBBY IS FLOODED WITH DAYLIGHT FROM A ROW OF HIGH WINDOWS ON THE LONGER STREET FACADE. DESIGNED BY OFFICE OF SUPERVISING ARCHITECT. HOWARD LOVEWELL CHENEY, CONSULTING ARCHITECT



U. S. POST OFFICE AND COURT HOUSE — PEORIA, ILLINOIS



GEORGE GRANT ELMSLIE AND THE CHICAGO SCENE

BY TALBOT F. HAMLIN

American architecture was not dead between 1900 and 1930. Here and there creative and revolutionary artists were doing their best to vindicate architecture as a creative art. It was in Chicago that such architects had found their freshest opportunities, and the work done by the various architects of the so-called "Chicago School" was large in amount and surprisingly high in quality. In addition to Purcell and Elmslie there were: Dwight H. Perkins, bringing to many of the Chicago public schools a note which was the one encouraging exception to the current Gothicism of municipal educational facilities; Walter Burley Griffin and his brilliant wife, designing beautiful houses and interesting subdivisions, and going on to win the competition for Canberra in Australia and refertilizing Australian architecture from America; Guenzel and Drummond, with their vivid and perhaps more erratic expressions of the same search for novelty.

It was no accident that this should be so. Chicago at the turn of the century was perhaps the most forward-looking town in the country, as alive artistically as it was commercially, full of exuberance, full of great dreams, which it did its best to realize. It was in Chicago that the new American poetry achieved some of its earliest individual triumphs under the aegis of Harriet Munro, a sister-in-law of the architect Root. It was in Chicago that American typography began to rise from the depths of 19th Century commercialism into work of surprising vi-

talinity, and the publication of Stone and Kimball are still, in their way, models of their own particular kind of typographic form.

Nor was the architectural creativeness of the region the sole property of any one or two individuals, but as much a part of this exciting, progressive spirit as the poetry or the typography. Sullivan, of course, was its parent, and most of the members of the Chicago School had been, directly or indirectly, under his influence or in his office. Wright began his own domestic work in the 1890's, and many of the later men of the School worked at various times with him. Yet these architects were no mere copyists, no mere imitators, either of Sullivan or of Wright. All sorts of other influences were impinging upon them, for the period was one of much artistic experiment all over the world. The Arts and Craft movement, started in England twenty years earlier chiefly through the work of William Morris, was still vitally alive. The more radical English domestic architecture, such as the work of Voysey and Baillie Scott, was much studied and admired. In this country Gustave Stickley, through his magazine, *The Craftsman*, was stimulating a wide interest in the frank and logical use of materials of all kinds. Moreover, the whole cultural life of Chicago at the time was remarkably sensitive to new ideas, and definitely searching for new methods of artistic expression which should be American.

At some time or other all the members of



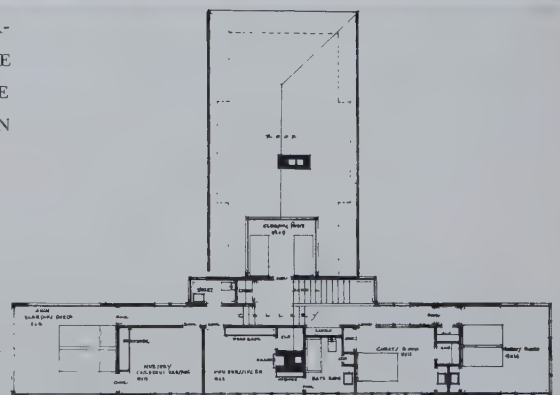
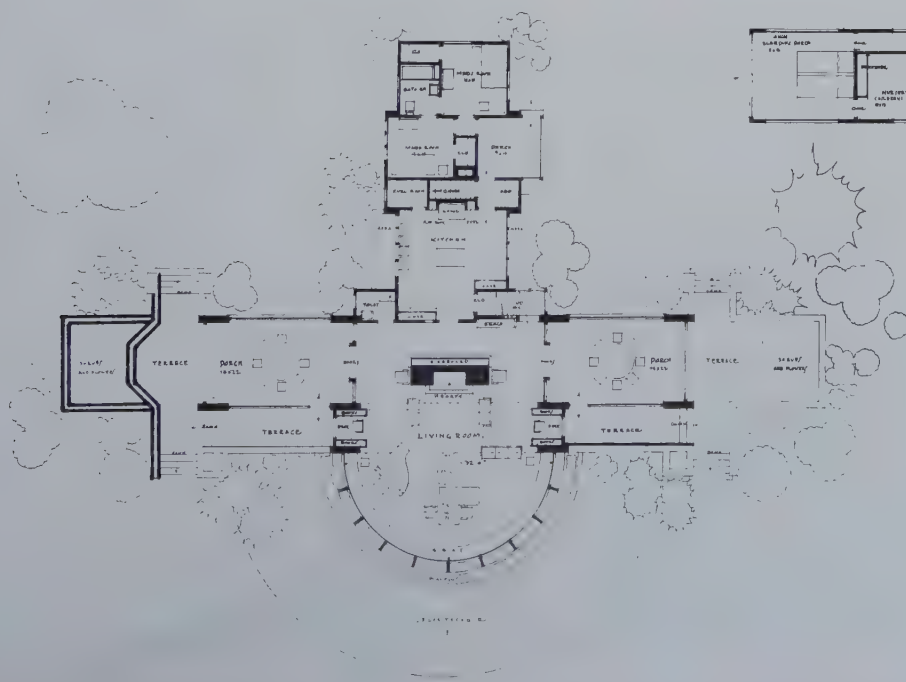
Photos by Nicholas Romano

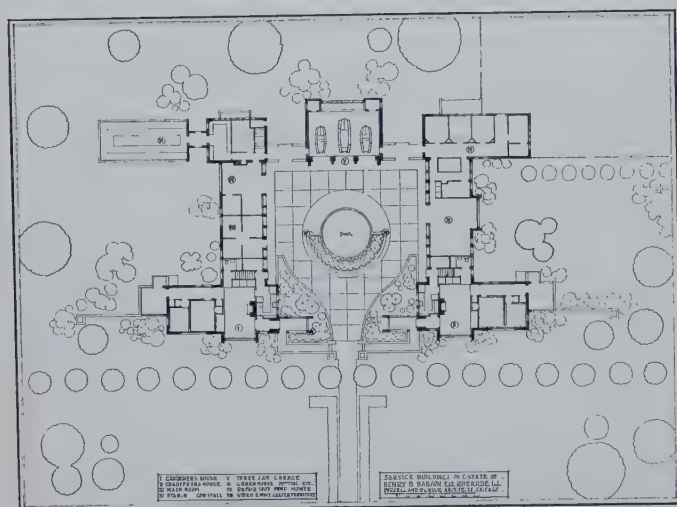


THE SUMMER COTTAGE AT WOOD'S HOLE, MASS., FOR DR. HAROLD C. BRADLEY, WAS BUILT THIRTY YEARS AGO, SINCE 1911 IT HAS CROWNED ITS STEEP WIND-BLOWN KNOLL, SUR-ROUNDED BY THE BLUE SALT TIDES. ITS EXTENDED HORIZONTALS, ITS DARING CANTILEVERS, ITS BOLD TREATMENT OF OPENINGS ARE SURPRISINGLY PRO-PHETIC. NOTE HOW THE LIVING-ROOM TRUSSES ARE DEVELOPED INTO DECORA-TIVE FEATURES, AND HOW THE NOOK CABINETS ARE FRANKLY INTEGRATED IN-TO THE WINDOW SHAPE



IN PLAN, THE BRADLEY HOUSE SHOWS THE KIND OF ARTICULATED, ORGANIC SYMMETRY ITS ARCHITECTS LIKED, AS WELL AS THE FREE FLOWING OF SPACE AROUND THE BROAD CENTRAL HEARTH, VIEWS ARE MAGNIFICENT; A SIMPLE PLAN ASSURES SUN AND CROSS-VENTILATION





THE BABSON ESTATE SERVICE GROUP AT RIVERSIDE, ILLINOIS, 1915, HAS AN ORDERED PLAN, DEVELOPED BY ORGANIC IMAGINATION INTO EXUBERANT FANTASY OF DETAIL AND DECORATION



this architectural group in Chicago had probably known each other well, and they all felt they were working in a new vein (an American vein), expressing a vital and enduring tradition, creating an architecture of democracy. They worshiped Sullivan—particularly the earlier Sullivan—as the first great exponent of this tradition. But they felt themselves primarily creators. Generally speaking, with one or two surprising exceptions, they admired each other's work and helped each other with it. Thus, both Mr. and Mrs. Walter Burley Griffin had been employed in the Wright office; and not only had Mrs. Griffin (Marion Mahoney) played a very important part in the Wright organization, but later we find her as associate architect with H. Von Holst for a large and beautiful house. Of all these architects, one of the most important firms—alike in the amount of work produced and in the continuity of it—was that of Purcell and Elmslie, at the beginning Purcell, Feick & Elmslie, and finally, Elmslie alone.

Elmslie had come to this country with his family from Aberdeen, Scotland, sometime in the 1880's, and after a year in business school he obtained a job in the office of Joseph Silsbee, where both Wright and George Maher were then employed. In 1890 Wright, who had moved on to Adler and Sullivan's, suggested that Elmslie be brought over as well. Elmslie rapidly became one of the most important draftsmen in the Adler and Sullivan office, and stayed on with Sullivan after the partnership had been broken up, in 1895, until he formed his own partnership with Purcell in 1909. During this later period he was Sullivan's chief designer and had complete charge of all the ornamental work, in the design of which he was given the greatest freedom. Thus he established early that special love and facility in ornament which has characterized his work ever since and which has always made him feel, as Sullivan felt, that no building was complete in which the structure did not flower as nature does. Naturally, too, the ornament which he has always used is, like Sullivan's, based on the harmonious contrast of geometrical form and vivid seminaturalistic foliage, the continual marriage of the static and the dynamic. In the meantime, Elmslie had met William Gray Purcell, who had worked briefly in the Sullivan office in 1903. Purcell was a graduate of the Cornell School of Architecture and with a classmate of his, Feick, had formed a small firm in Minneapolis, and the new firm invited Elmslie to join it as

a partner in 1909. Feick, who was primarily the engineer, withdrew in 1913 to return to the building business in Sandusky, his home town. Elmslie was pre-eminently the designer and draftsman; Purcell the man who understood materials as few people of his time understood them, and through his sensitive feeling for them and their use played an important part in the development of the ideas. The association between Elmslie and Purcell was of the closest—"osmotic, in a sense," said Mr. Elmslie at one time—so that despite separation in function the design of the firm was a harmonic effort. Since Mr. Purcell's departure for California in 1920, Elmslie has gone on, either by himself or sometimes as associate architect with others, keeping alive with unusual integrity the creative enthusiasm of the earlier Chicago School, and giving it continual new expression as conditions and ways of building and tastes have changed. It is a remarkable history of a continuing integrity always refusing to compromise with the current fashions in eclecticism and apparently equally unimpressed with the starknesses of the International Style.

With such a history it is natural that the power of the Sullivan influence should be obvious in much of Elmslie's work. It is natural to find, particularly in some of the houses, those elements—broad horizontal lines, rows of windows close together, projecting eaves, and open plans—which were typical of the Chicago School in general, although famous chiefly today because of their personal interpretation in the work of Wright. Yet there are marked differences between the Elmslie work and the work of Sullivan and of Wright. There is a certain characteristic simplicity of plan—as, for instance, in that of the Bradley cottage on the Crane estate at Wood's Hole—and a love of direct and unforced symmetry, accented here and there by delicate balanced off-center elements. There is a most prophetic love of glass, and it is interesting to find again and again that in these early houses between 1911 and 1915 broad unbroken sheets of plate glass used often in ways that are quite contemporary today—as, for example, in the Sexton house overlooking Lake Minnetonka, or the great curved living-room of the Bradley cottage. There is also a strain of pure imaginative fantasy, running through all of the work, which is personal and engaging. It appears in its most delectable manifestations in the service buildings of 1915 on the Babson estate at Riverside, Illinois, and in the interior of the Westminster

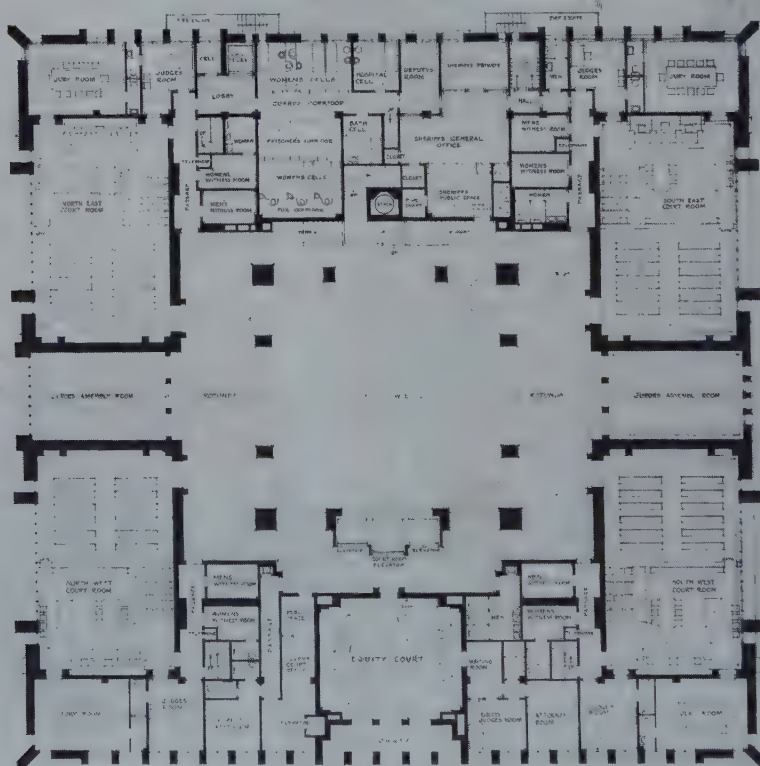


THE DECKER HOUSE, OVERLOOKING LAKE MINNETONKA, 1913, HAS A BASIC PLAN TYPE SIMILAR TO THAT USED FIRST AT WOOD'S HOLE, BUT WITH MANY VARIATIONS DUE TO DIFFERENCES IN SIZE AND GEOGRAPHICAL LOCATION



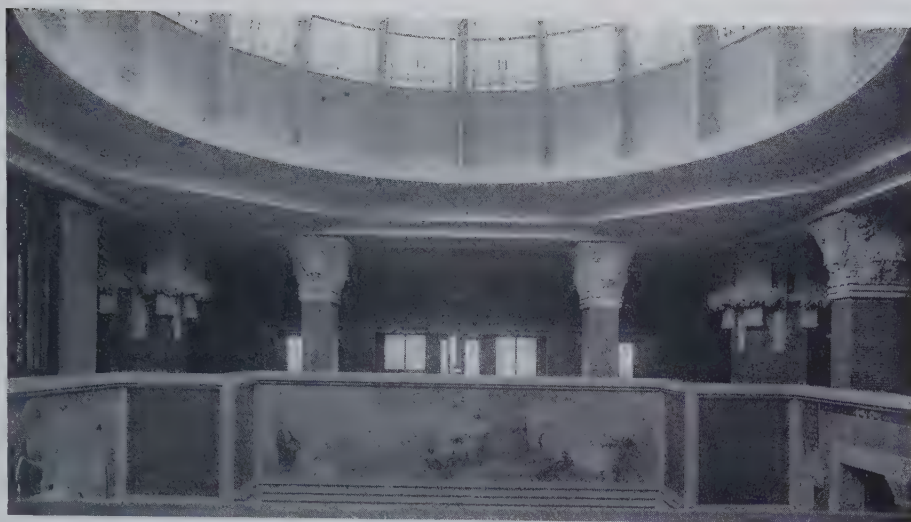
THE BOLD BREADTH OF THE DECKER HOUSE MANTEL, LIKE THE DELIGHTFUL PORTE COCHÈRE AND THE PASSAGE TO THE GARAGE, EVIDENCES THE CREATIVE QUALITY AND FREEDOM FROM TRADITION OF PURCELL AND ELSLIE'S DESIGNS





THE INTERIORS AND THE ARRANGEMENT OF THE SIOUX CITY COURTHOUSE, OF WHICH WILLIAM H. STEELE AND PURCELL AND ELMSLIE WERE ASSOCIATE ARCHITECTS, ARE AS DARINGLY ORIGINAL AS THE EXTERIOR. THE ARTICULATION OF THE COURTROOM FLOOR PLAN, WITH ITS INGENUOUS SERVICE ARRANGEMENT, IS CLEAR AND SIMPLE

IN THE ROTUNDA, OF WHICH THE UPPER PART IS SHOWN, THE EXTERIOR COLOR SCHEME IS PRESERVED. THE COURTROOMS, FLOODED WITH DAYLIGHT, HAVE AN UNUSUAL SENSE OF QUIET AND OF APPROPRIATELY DEMOCRATIC DIGNITY

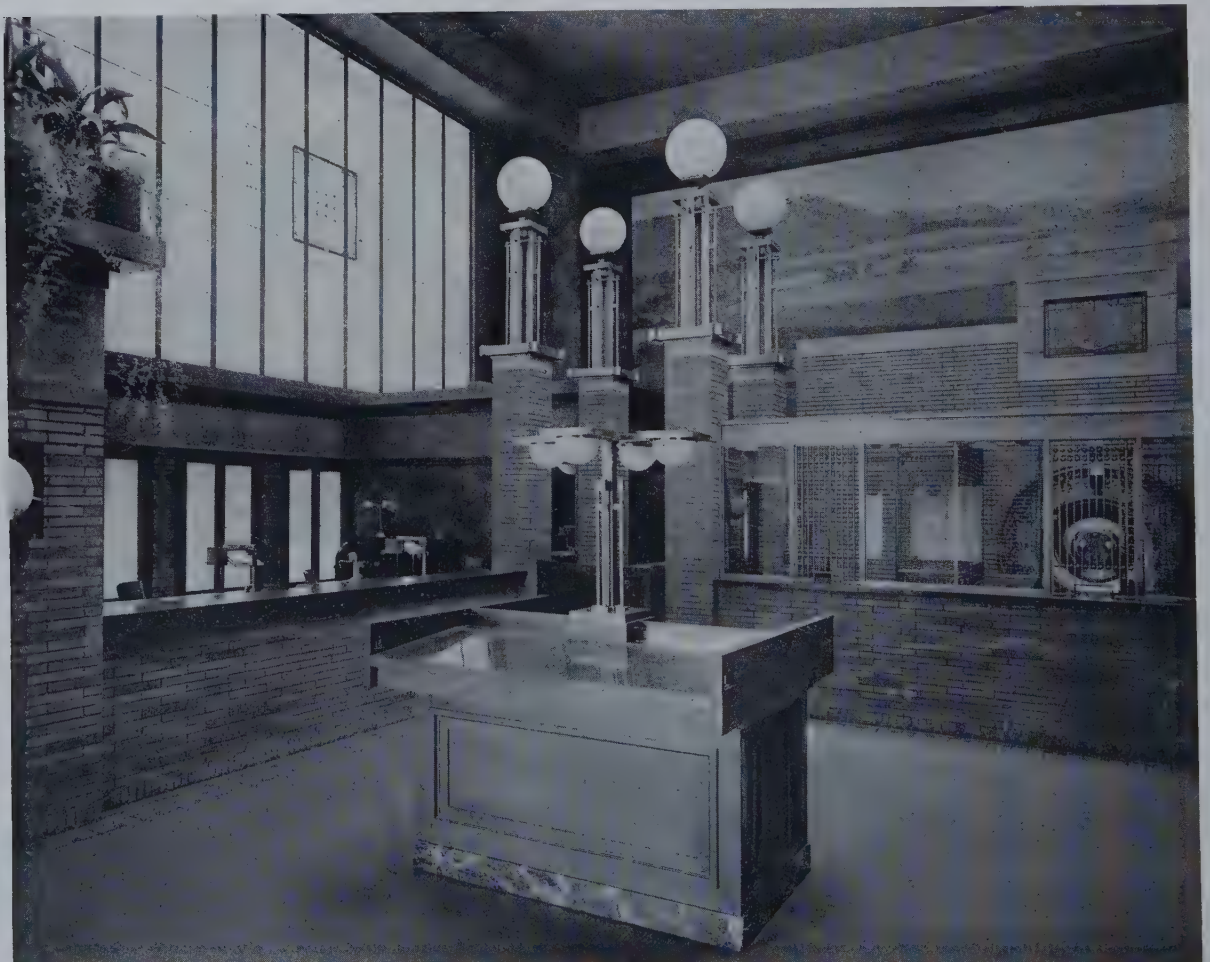


THE BOLD GEOMETRIC MASSES OF THE SIOUX CITY COURTHOUSE WERE IN 1917 UNIQUE, AS WERE THE REGULAR RHYTHMS, THE CONTRASTS OF HORIZONTAL AND VERTICAL, THE EMPHASIZED COURTROOM BAYS ON THE SIDE, AND THE DARING AND MEANINGFUL DECORATION OF THE PORTAL SHOWN ACROSS PAGE





THE WINONA, MINNESOTA, MERCHANTS' BANK, 1912, IS TYPICAL OF MANY PURCELL, FEICK, AND ELMSLIE BANKS IN ITS AIRY OPENNESS AND A UNIFYING USE OF SIMILAR COLORS AND MATERIALS OUTSIDE AND IN





THE ENTRANCE OF THE TOPEKA, KANSAS, CAPITOL BUILDING AND LOAN BUILDING, 1922, CONVINCINGLY COMBINES STRUCTURE AND DECORATION, GEOMETRY AND IMAGINATION



THIS PHOTOGRAPH SHOWS THE OLD SECOND NATIONAL BANK, AURORA, ILLINOIS, DONE IN 1924. BOTH OF THESE BUILDINGS WERE BY GEORGE G. ELMSLIE, WITH NO ASSOCIATES



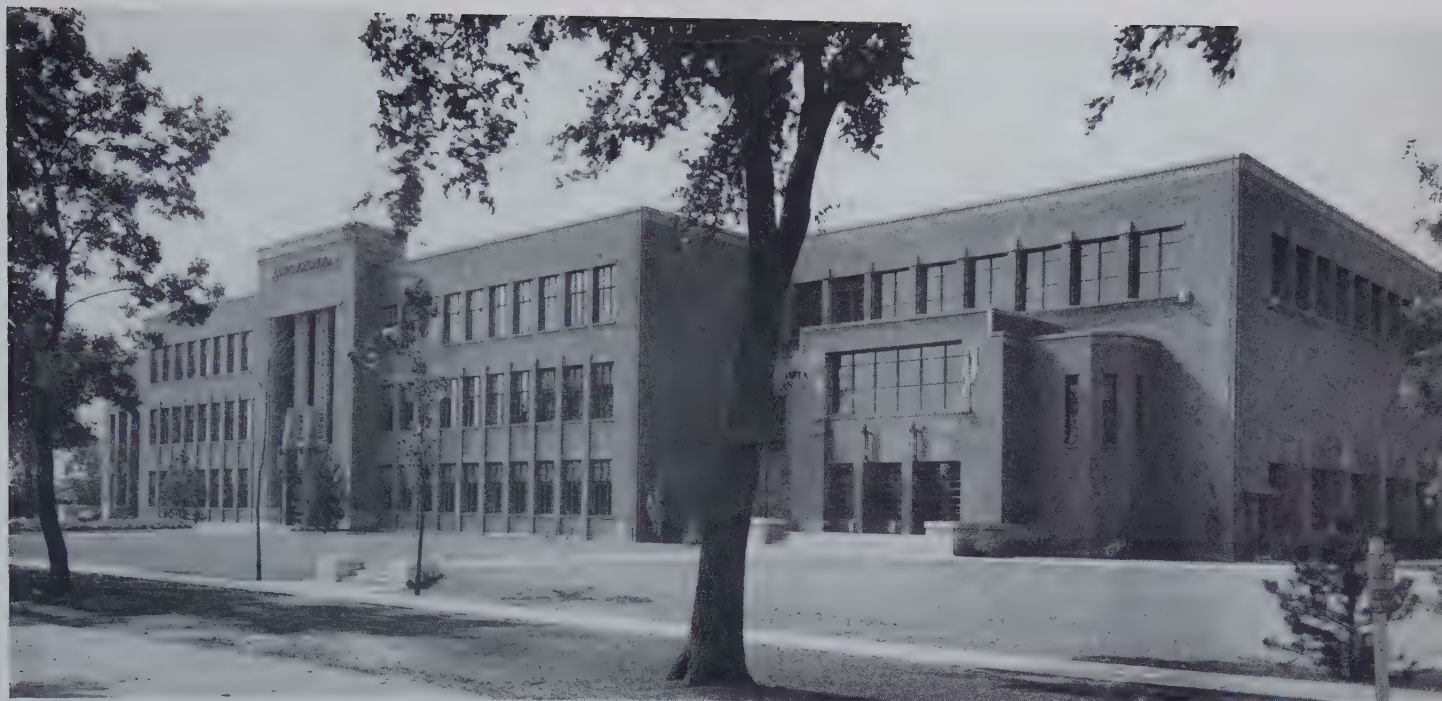
THE THORNTON TOWNSHIP HIGH SCHOOL AT CALUMET CITY, ILLINOIS, MAIN ENTRANCE, WILLIAM S. HUTTON AND GEORGE G. ELMSLIE, ASSOCIATE ARCHITECTS. HERE A GREAT RICHNESS IN DECORATION AND MATERIAL DO NOT CONFUSE THE ESSENTIAL SIMPLICITY OF THE GEOMETRIC PATTERN BENEATH IT. EMIL ZETTLER WAS THE SCULPTOR OF TWO TERRA COTTA FIGURES

Bodie

School Kindergarten of the Westminster Church in Minneapolis. At times, as in parts of the Sioux City Courthouse, in the design of which Purcell and Elmslie were associated with William Steele, this quality seems almost to run away with the design, producing what appears to this reviewer occasional overlavish and overheavy decoration and a too great breaking up of form; but when it is schooled by a tightly composed geometry of design, as in the entrance motif of the Capital and Loan Building at Topeka or in the courtroom interiors at Sioux City, there results a note of rich and human beauty which is unique.

In much of this ornamental work, Mr. Elmslie has been associated with the sculptor, Alfonso Iannelli. Some of it has that strange quality of wistfulness that we are tempted today to call sentimental, which runs through a great deal of the decorative art at the beginning of the century; yet, as it is used by Elmslie, the purpose is so sincere, the idealism expressed so honest, that to call it sentimental is impossible. It is rather

that, through all his work, Elmslie has been designing for people, for human beings, who like richness, who like sculpture, who are not or should not be afraid of their own emotions; and his daring in the continued use of this rich organic decoration might well be considered perhaps a challenge to us and our times and ideals, rather than a mark of retrogression on his own part. For the recent work is quite different in character from that done earlier. The two schools in Hammond and Calumet City, one in association with William S. Hutton within the last five years, show this to a surprising degree, for in them Elmslie has adopted, where these seemed most to fit, many of the current idioms of contemporary design—its basic rectangularity, its dependence upon materials and proportion—and then gone that one step further which present-day architects so seldom take, the step of letting the forms flower into richness of carved and modeled ornament. The effect is again remarkable. It shows how naturally the two ideals of simple regularity and of concen-



THE OLIVER MORTON SCHOOL, AT HAMMOND, INDIANA, LIKE THAT AT CALUMET CITY, WAS DESIGNED IN ASSOCIATION WITH WILLIAM S. HUTTON. ESPECIALLY INTERESTING IS THE AUDITORIUM WING WITH ITS INVITING ENTRANCE. IN THE TERRA-COTTA ORNAMENT, AS IN ALL THE ELMSLIE DECORATION, THERE IS A CONTINUAL SEARCH FOR EQUILIBRIUM BETWEEN THE STATIC AND DYNAMIC. THE ORNAMENTAL BANDS THAT BEGIN AND END THIS PRESENTATION WERE ALSO DESIGNED BY MR. ELMSLIE FOR USE AS STENCILS. ALFONSO IANNELLI DID THE FIGURE SCULPTURE

Photos by Bodie



trated richness can be combined—again another expression of the static and the dynamic out of the interweaving of which life arises.

And Purcell and Elmslie always considered color as vital a part of architecture as form. They not only studied most carefully the colors of materials themselves—brick, various stones or marbles, wood, and so forth—but also sought in the interrelation of these to obtain a rich, warm color harmony which would carry through from exterior to interior. Thus they liked to use the same colored brick both inside and out, as in the Sioux City Courthouse and many of their banks, and they were not afraid to use colored ornament and even glass mosaic to enrich and accent their basic color harmonies. Much of the exterior ornament shown in the illustrations is in colored terracotta, so that its effect is but dimly conferred by the illustrations, and the rich symphonies of browns and reds and subtle greens is as much a part of the design as the richness of line or plane. In this handling of color Mr. Elmslie went far beyond Sullivan's customary monochromatic schemes; and his buildings have a human appeal, through this sensitive use of color, which is quite rare in American design. It is another unfortunate concomitant of the dominance of photographs today that there is so little current appreciation, and even less use, of the potentialities of integral and organic color in architectural design.

Another element which is noticeable in the work from 1910 on is a fastidious feeling for material. Here the influence of Mr. Purcell is perhaps especially strong, for Purcell has written over and over again of the necessity of allowing materials to be themselves. For him a building is not a mere dictated coordination of unfelt and unfeeling materials, but rather the organic building together of many elements each of which has, and seems in the finished building to continue to have, its own special life. This special feeling for materials is, they both claim, merely a carrying on further of the Sullivan doctrines of democracy: that just as ultimate respect is due to all men everywhere, both the greatest and the least, so in architecture ultimate respect is due to all materials from the cheapest to the most expensive, from the meanest to the most rare.

There is one more quality obvious in the work of Purcell and Elmslie and the later work of Elmslie himself, as it is apparent in that of many other individuals of the Chicago School, which I think we should today do well to ponder. It is deep faith that architecture is more than a technique, and designing more than a geometric puzzle, but rather that buildings are truly a flowering of mankind's deepest as well as commonest emotions in the same way that music and poetry are. Architecture thereby becomes essentially lyric, and these designers were not afraid to be lyrical even to the point of extravagance. They knew that architecture grew out of the same soil as the other arts, and that the great architect should know the thoughts and the literature and the art of his time just as well as he knows its industry and its economics. In the second number of the *Western Architect* devoted to their work in 1915, the greater part of the text consists of quotations from various authors who seemed to them significant: Romain Rolland, Edward Carpenter, Richard Wagner, Oscar Wilde, Gerald Stanley Lee, and Otto Wagner (the only architect). The Romain Rolland quotation from *Jean Christophe* is especially interesting because it perhaps more than anything else expresses what these two men are and what they have tried and are trying to do:

"He wished his music to be an art of communion with other men. There is not a vital art save that which is linked with the rest of humanity.

". . . . You are addressing men; use the language of men. . . .

". . . . There are no words noble or vulgar; there is no style chaste or impure, there are only words and style which say or do not say exactly what you have to say. Be sound through and through in all you do; think just what you think and feel just what you feel, let the rhythm of your heart be in your writings. The style is the soul.

". . . . Let us avoid like the plague any artistic language that belongs to a caste like that of so many writers and especially of so many French musicians of today. We must have the courage to speak like men, not artists."

Perhaps we today may somehow through the inspiration of these creative artists and the Chicago School find our own new lyricism, as necessarily personal as our own integrity, as necessarily contemporary as our own materials and the problems we face.





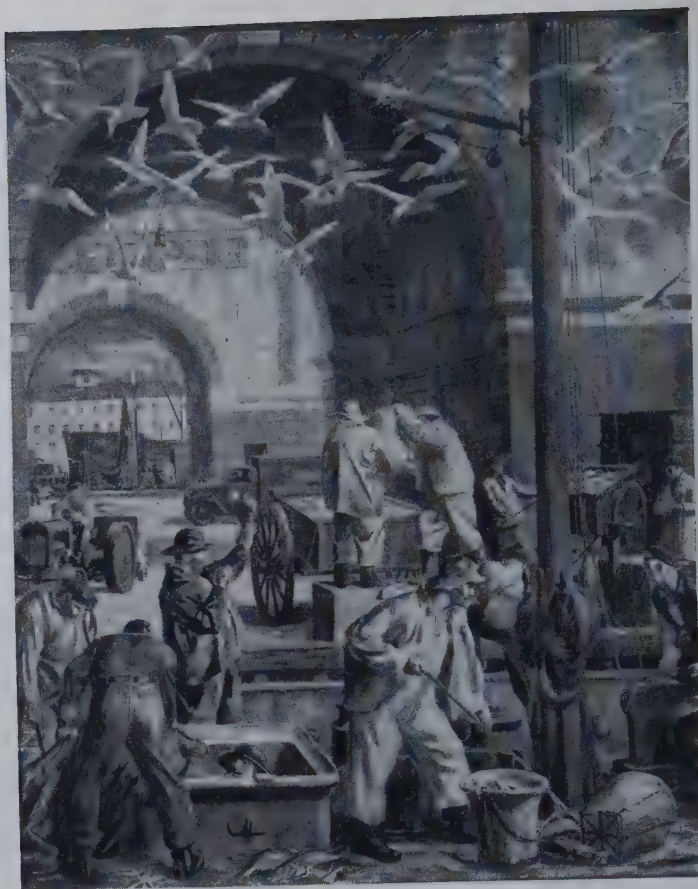
Photos by Peter A. Juley & Son

DETAIL OF "THE MUNICIPAL FISH PIER"

SIX MURALS OF BOSTON TODAY — BY FRANCIS SCOTT BRADFORD



"ANCIENT AND HONORABLE ARTILLERY FETE"



"THE MUNICIPAL FISH PIER"



"MUSIC SHELL ON RIVER ESPLANADE"

SIX MURALS OF BOSTON TODAY FOR LEVER BROTHERS COMPANY



"CHRISTMAS EVE: LOUISBURG SQUARE"



"VIEW OF HARVARD UNIVERSITY"



"SKATING IN THE PUBLIC GARDENS"

BUILDING, CAMBRIDGE, MASS. — BY FRANCIS SCOTT BRADFORD



THE MURALS ARE IN THE LOBBY OF LEVER BROTHERS COMPANY ADMINISTRATION BUILDING IN CAMBRIDGE, DESIGNED BY DONALD DES GRANGES, OF BOSTON, AND SHREVE, LAMB & HARMON, ARCHITECTS, OF NEW YORK. THE LOBBY WALLS ARE OF TEAKWOOD AND THE TEMPERA PAINTINGS ARE VARNISHED. BRADFORD INCLUDED ONE HUNDRED AND TEN PORTRAITS OF CONTEMPORARY BOSTONIANS IN THIS SERIES



SIX MURALS OF BOSTON TODAY — BY FRANCIS SCOTT BRADFORD

A. R. P. AND OUR OFFICE OF CIVILIAN DEFENSE

BY SERGE CHERMAYEFF

In the article written for the July issue an attempt was made to anticipate some of the necessary steps which would have to be taken by the authorities in order to make A.R.P. a realistic measure.

Since that article was written we have learned of the establishment of machinery for the wider purposes of civil defense. In this article an attempt is made to analyze what information is available about this and to suggest a program of participation by Planners, Architects and allied Designers which might prove efficient for the purposes of A.R.P. in particular within the Government's program.

We are all familiar now with the general announcement made through the press of establishment of an "Office of Civilian Defense." Following quickly on this announcement the head of the new department, Mayor LaGuardia, gave a further outline of the proposed activities of his office over the radio.

Mayor LaGuardia's statement amounted to the projection in general terms of the idea that civil defense requires the co-operation of the population as a whole and direct participation by a very large number in specific tasks for which enrollment and training would immediately start.

The original announcement contains sufficient general information as to the scope and policy of the new office to give some indication to technicians concerned with A.R.P. without waiting for further details. These details not available at the moment of writing will no doubt be made known soon, or indeed might already be known by the time this appears in print.

The main points which have already emerged are the following:

The organization of the O.C.D. into two principal sections: First a Board for Civilian

Defense to include representatives of the War, Navy and Justice Department, and the Federal Security Agency whose tasks will presumably include the forging of the missing links in the A.R.P. chain. For the purpose of our subject matter the most important of these* will be the classification of areas throughout the country as "vulnerable" and "invulnerable," the drafting of necessary laws to enforce any measures advocated and method of financing them. Second, a Committee of Voluntary Participation, amongst whose tasks one supposes the drafting of codes affecting all A.R.P. work, such as surveys, construction, evacuation, war services, and the training of personnel which will be directly engaged in putting these various measures into operation.

It is in the second section of the O.C.D. that the participation of synthesising minds of Planners and Architects seems essential from the outset. It is only in the event of this being ensured that these specialists will be able to make a realistic contribution. It is to be hoped that the inclusion of such people will be made possible.

Also, there is the announcement that the country will be subdivided into defense regions under the direction of regional headquarters to be set up for this purpose, which will direct the work to be carried out directly by various local authorities. Such a program seems to indicate that it is Mayor LaGuardia's intention to make possible precisely such participation by all those equipped. This program further appears to imply two sets of tasks. In the case of the head office, the establishment of principles and controls, and in the case of the regional offices the establishment of machinery to put these into operation.

If this be so then the organization of interested professions such as Planners, Archi-

* See Editor's Note on page 593.

fects, and Engineers would most usefully follow the pattern established by the O.C.D. itself. To take the architectural groups as an example, the headquarters of the A.I.A. could establish an architectural central defense committee. Regional representatives of the A.I.A. would serve on this. Such a committee would be in the position to correlate findings, establish professional standards, and prepare a roster of professionals available for the work, which could be called upon as required by State, Municipal, and other authorities.

If further, a contact could be established between such a central professional committee as mentioned above through a representative serving permanently on the O.C.D.'s volunteer participation committee, and if in their turn the regional headquarters would have a representative of the professional regional committee to act as liaison officer this procedure would at once eliminate overlapping, redundancy, duplication of research, and waste and error generally.

This procedure would also facilitate the task of everyone concerned throughout the whole country in the establishment of a common code of standards. The importance of uniformity as far as this is possible within inevitable local variations, is a point which has not been sufficiently stressed and I will return to this later.

Once the O.C.D. has issued the information as to which areas are likely to be subject to deliberate, sustained air attack—i.e. which are "vulnerable," and those which are relatively immune from attack to be designated "invulnerable," some of which will become "reception" areas for evacuation—the first task of survey may be usefully commenced.

It is of course obvious why the classification of each area to be surveyed is of paramount importance. The survey in any one classification will have a totally different set of objectives from the others. Whereas, in the case of a reception area, the survey will be concerned with data affecting the establishment of new housing for evacuees from other areas, and little or no protective work such as shelters; in the case of a vulnerable area, the survey will form the basis of a master plan for the provision and maintenance of direct protection for production and the civilian population remaining there. It would also have to envisage such special services as may be required before, during, and after air attacks.

The importance of seeing clearly the purpose of this preliminary work of survey in each category, the correlation of the data,

its analysis for purposes of A.R.P., and the synthesis into a master plan for action seems to call for the co-operation of Planners and Architects at this time. It is at the very outset of a program of civilian defense that these specialists can make their most cogent contribution.

Because the particular qualifications of the Planning and Architectural professions, those of correlators of the findings of many different specialists has not been recognized elsewhere by the authorities, this point should be stressed again. However vital the specialist's contribution, such as that of the engineer, may be in itself, its relation to the organic whole is the most essential point. This task of integration is precisely that which the Experienced Planner is best equipped to carry out.

If for the reasons given above the authorities do call in the Planning and Designing professions for the immediate purpose of survey, execution, and wartime service these will have to co-operate throughout with Material supply sources, Industry, and Labor. A close collaboration on the part of all these from the start is essential in order to provide a smoothly functioning organism for the Administration to employ. On the face of it, it appears as if it were the intention of the O.C.D. to have all these protagonists 'round one table, and if this guess is a good one it suggests that the final regional committees will include among its personnel representatives of the Planning and Designer professions as well as Manufacturers and Labor.

The benefits accruing out of such a procedure of co-operation would be many. It would immediately forge a most important instrument for making known the whole pattern involved in civilian defense not only to the specialists concerned but to the community as well. The various measures advocated would from the start assume certain forms which could become standard practice as far as such is advisable. The desirability of establishing uniformity, alluded to earlier, cannot be overstressed, particularly in respect to measures adopted within vulnerable areas.

The point is perhaps made best by citing some examples which would concern directly Planners and Designers: blackout equipment, air raid shelter design, and all forms of special equipment such as ventilating, decontamination, and so on.

The uniformity of such things as air raid shelter equipment or their *reduction to the smallest possible number of types* will not only have the obvious advantage of economy

by mass production method but will further ensure the immediate recognition of the various elements by the user wherever he may find himself in the event of an air raid, and will therefore increase enormously the efficiency of such elements for the safety of the population as a whole by guaranteeing the ease of its manipulation by anyone, and provide for inter-changeability and ease of replacement of any damaged or destroyed parts in an emergency.

Again the minimal number of types in all such equipment will greatly facilitate and accelerate the drafting of specifications and codes for the enforcement of these by the Administration. At the same time it will eliminate or at least reduce to a harmless quantity the production of inefficient or insufficiently complete equipment. This would apply particularly to such things as may be offered on the market, but it would apply equally to shelter design as a whole and detail elements of shelters such as gas-tight or splinter-proof doors, etc.

Obviously such a program of standardization would have to retain a certain flexibility, sufficient to allow the production of improved types from time to time as actual experience dictates, but that the basic principle of standardization should be established at the earliest possible time seems to have many more arguments for than against. Such a principle is most readily applied to all such things as are not compromised by being part of some existing structure, as would be the case in the "design" of a basement shelter to be erected within an existing building; but even in this case it appears desirable that individual items such as have been mentioned should be standard.

This question appears to the writer to be so important as to almost demand the establishment of something like a *Bureau of A.R.P. Standards* as part of the O.C.D.

Such a bureau could perform a number of important tasks. First—it could assist or be directly responsible for the drafting of model specifications to cover all A.R.P. design for the building trade, manufacturers,

and the operatives concerned in the making. Second—This bureau could prepare the relevant, explanatory literature to be issued to the users, such as plant owners, workers, educational authorities, householders, etc. The designers of shelters will be well-equipped to assist in making the purposes and method of use understood by the potential occupants.

Third—Such a bureau could draw up schedules of all essential material supplies for A.R.P. purposes and thereby assist the Administration to ensure that these are made available. The need for a control of this kind was illustrated in the case of both timber and cement in England, where a completely unnecessary lack of supply and transport facilities for these produced a fatal shortage in a most critical period. That this occurred was undoubtedly due to the lack of agreement throughout the country as to the measures to be adopted and the preparation for them.

Fourth—Such a committee would eventually be best equipped to deal with the necessary analysis of all A.R.P. construction and its classification into purely war measures and such work as may have a peace-time utilization value. A familiar example of the latter in the case of A.R.P. work in vulnerable areas is the large public shelters which could with small structural alterations become a car park. The same principle can be applied in the case of reception areas to evacuation structures. Again England provides a parallel. The evacuation units erected by the National Camps Corporation in rural districts for occupation by school children were designed to be retained after the war for use as holiday camps. Similarly, an additional assembly building attached for wartime purposes to an existing small town may become a valuable asset for that community in peace-time.

To conclude: It appears that the machinery of the O.C.D. will make a rational A.R.P. plan possible. It remains for the Planners and Architects to seize the opportunity presented and to play an important and responsible part in this task.

EDITOR'S NOTE—In the opinion of James P. Kirby, O.C.D. Information Officer who read Mr. Chermayeff's article before publication, "the most important of these will be the development and promulgation of plans and preparation of instructional material for organizing the civilian population in such a manner as to provide maximum protection and the orderly functioning of Government under emergency conditions." We are also advised by Mr. Kirby that O.C.D. regards "protection" and "voluntary participation" as closely connected rather than divided as Mr. Chermayeff suggests by his treatment of the subject. He also advises us that "the entire matter of air raid structures occupies a very low priority in our plans. Our progress in this matter has been limited to the issuance of instructional data on air raid shelters. The vastness of our country precludes any uniformity in methods for the application of details for shelters." We are indebted to Mr. Kirby for these timely comments on a subject of such vast importance to the planning professions. The services of architects in defense planning have been placed at the disposal of O.C.D. by Richmond H. Shreve, A.I.A. President

WASHINGTON REPORT

COMPILED BY A. D. TAYLOR OF CLEVELAND

DEFENSE HOUSING

Substantially all of the available funds under the Lanham Act appropriations *to date* have been allocated to specific defense housing projects now in the process of being planned or under actual construction. Many projects have been completed. It is expected that \$300,000,000 additional funds under the new Lanham Bill will be available within the next few weeks. This bill is now before the House Committee and will, in all probability, be passed by the House and by the Senate before this report is published.

The program of Defense Housing is being divided almost equally between the Public Buildings Administration and the United States Housing Authority. It seems that an increasing amount of Defense Housing is being done through the Division of Defense Housing in the Federal Works Administrative office.

The following projects have been released through the U. S. H. A. since the date of the last report published in these columns:

Beaver County, Pa.

Pulaski Township...	100 units
Monaca	100 units
Midland	30 units
East Rochester.....	75 units
Baden	250 units
Alquippa	50 units
Vanport	125 units
West Mayfield	175 units
Buffalo, N. Y.	200 units
Seattle, Wash.	700 units

The Defense Homes Corporation, incorporated for the purpose of providing homes in the

higher rental brackets, is capitalized for \$10,000,000. This corporation does not have the right of Eminent Domain. It must negotiate for the purchase of property on which it proposes to develop Defense Housing. These houses of the single and of the multiple family type are owned and rented by the Defense Home Corporation. The size of the average project approximates 150 units. The largest project approximates 980 units, at Newport News. Employment of architects, engineers, and landscape architects in connection with the development of these projects is done directly by the offices of this corporation located in the Reconstruction Finance Company's offices in the Lafayette Building, Washington, D. C. No list of projects is published, as is the procedure with the Federal Works Agency program. It is quite likely that the program of housing through the Defense Homes Corporation will be rather extensive. The only way in which to procure employment on these housing projects is to have one's qualifications and application on file with the Defense Homes Corporation.

Another Bill is now before Congress to increase the appropriations for the Federal Housing Administration, under Title VI, to a total of \$300,000,000, which may be available for the insurance of mortgages in connection with Defense Housing constructed by private companies or individuals. The Bill for this additional appropriation is now before Congress.

NEW LEGISLATION

Bill No. H. R. 4545 provides for the acquisition and equipment of Public Works made necessary by the Defense Program. (Generally known as the "Community Facilities Bill"). This bill which was originally introduced in the House on April 28, passed by the House of Representatives on May 9, reported to the Senate on June 9, and passed by the Senate in amended form on June 12 was finally approved by the President on June 28. Copies of this bill may be procured from the clerk of the House of Representatives or from the clerk of the Senate. This bill makes Federal funds \$150,000,000 available through loans or through outright grants to communities for the construction of Public Works confined primarily to schools, waterworks, sewers, garbage, refuse disposal facilities, sanitary facilities in general, treatment and purification of water, hospitals, recreational facilities, streets and access roads made necessary by the development of Defense Projects within the immediate environment of any community finding it necessary on account of the Defense Program to expend money for these purposes. In some instances the government will enter these communities with the approval of the community and build directly, with government funds, the projects which are necessary. A further bill as of the date of this report is under consideration as a *second amendment* to the Lanham Bill, providing funds for Defense Housing.

Under Bill No. H. R. 10412 (the original Lanham Bill) \$150,000,000 was made available for Defense Housing. Under H. R. 3486 an additional \$150,000,000 was made available for Defense Housing. Under Bill H. R. 5211 which is the second amendment to the original H. R. 10412, the appropriations for Defense Housing are proposed to be increased from \$300,000,000 to \$600,000,000.

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CANTONMENTS AND ORDNANCE PROJECTS

Additional cantonments and ordnance projects have been released as shown by the list at right. Under a new ruling, the architect-engineer is not only required to develop the site plans for cantonments but also to prepare a comprehensive camp development plan which requires the services of qualified landscape architects, employed through the Office of the Architect-Engineer. This employment may be upon a *per diem* basis for time of principal and assistants, or upon a lump sum fixed fee basis for the time of the principal plus reimbursement for the time of office assistants.

On August 1st, the Design Section of the Engineering branch in the Construction Division of the Quartermaster General's office was recognized as follows:

The Troop Group, the Plant Group, and the Storage Group are placed in the Projects Unit with *Lt. Col. Frederick A. Muhlenberg* as Chief.

The Civil Engineering Group, Mechanical Engineering Group, Architectural Group, and Estimating Group are placed in the newly created "Architects and Engineers Unit," with *Leonard C. Urguhart* as Chief of the Unit.

R. E. Lawrence is the chief of the Civil Engineering Group. *Joseph Shoemaker* is to be chief of Mechanical Engineering Group. *Benedict Farrar* to be

TRIANGULAR DIVISIONS

<i>Project</i>	<i>Architect-Engineer</i>
Ozark-Enterprise, Ala.	J. E. Sirrine & Co., Greenville, S. C.
Fort Huachuca, Ariz.	Headman, Ferguson & Carollo, Phoenix, Ariz.
Paris, Texas	Rollins & Forrest, Dallas, Texas.
Colorado Springs, Colo.	Paulette & Wilson, Topeka, Kansas; Fisher, Fisher & Hubbell, Denver, Colo.
Durham, N. C.	William M. Piatt, Durham, N. C.; W. S. Lee Engr. Co., Charlotte, N. C.
Camp McCoy, Wisc.	Meade, Ward & Hunt, Madison, Wis.
Bastrop, Texas	Freese & Nichols, Ft. Worth.

ARMORED DIVISIONS

Hopkinsville, Ky.	Wilson, Bell & Watkins, Lexington, Ky.
Waco, Texas	Wyatt C. Hedrick, Inc., Fort Worth.
Venice Beach, Fla.	Frank W. Bail, Ft. Myers.
Winter Training Camp	Shanley, Van Teylingen & Henningson, Great Falls, Mont.
Henrys Lake, Idaho	
Huntsville (Ala.) Chemical ..	Whitman, Requardt & Smith, Baltimore, Md.
Warfare Plant	

ORDNANCE PLANTS

<i>Project</i>	<i>Operator</i>	<i>Architect-Engineer</i>
Des Moines Ord. Plant Small Arms Ammunition Des Moines, Iowa	U. S. Rubber Co.	Smith, Hinchman & Grylls, Detroit. Howard R. Green Co., Cedar Rapids, Iowa.
Twin City Ord. Plant St. Paul, Minn.	Federal Cartridge	Smith, Hinchman & Grylls, Detroit.
Utah Ord. Plant Salt Lake City, Utah	Remington Arms	Smith, Hinchman & Grylls; R. J. Tipton, Denver.
Volunteer Ord. Works (TNT) Chattanooga	Hercules Powder Co.	Stone & Webster, Boston, Mass.
Maumelle Ord. Works Marche, Ark.	Cities Service Co.	The Lummus Co., New York, N. Y.
Louisiana Ord. Plant Minden, La.	Silas Mason Co.	Silas Mason Co., Inc., New York City.
Lone Star Ord. Plant Texarkana, Ark.	Lone Star Defense Corp.	The Chester Engineers; Prack & Prack
Kansas Ord. Plant Parsons, Kansas	Johns Manville Co.	Consoer, Townsend & Quinlan; Battey & Childs, Chicago, Ill.
Dixie Ord. Works Monroe, La.	Commercial Solvents	M. W. Kellogg Co., New York, N. Y.
Missouri Ord. Works Louisiana, Mo.	Hercules Powder Co.	Bechtel, McCone, Parsons Corp., Los Angeles.
Oklahoma Ord. Works Choteau, Oklahoma	duPont Company	duPont Co., Wilmington, Del.
Arkansas Ord. Plant Jacksonville, Ark.	Ford, Bacon & Davis	Ford, Bacon & Davis, New York, N. Y.
Copperhill (Tenn.) Sulphuric Acid Plant	Tenn. Copper Co.	Leonard Eng. Co., Chicago, Ill.
Jayhawk Ord. Works Baxter Springs, Kan.	Pittsburgh Midway Coal & Mining Co.	Chemical Const. Corp., New York, N. Y.
Mississippi Ord. Plant Flora, Miss.	General Tire & Rubber Co.	Charles T. Main, Inc., Boston, Mass.
Illinois Ord. Plant Carbondale, Ill.	Sherwin Williams Co.	Charles W. Cole & Son, South Bend, Indiana.
Redstone Ord. Plant Huntsville, Ala.		Whitman, Requardt & Smith, Baltimore.

chief of the Architectural Group. *Frederick H. Fowler* is to serve as chief consultant on Civil Engineering activities and *G. E. Bergstrom* is to be in charge of the new War Department building (costing approximately \$35,000,000 and housing 40,000 employees) which was, until the President voiced an objection, to be located in Arlington on the site of the Bureau of Plant Industry Experimental Area.

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CIVIL SERVICE

It is reported that between 1,600 and 2,000 individuals filed examination papers in the assembled and unassembled examinations for the different grades of Landscape Architect. It is interesting to note that in response to a questionnaire of some months ago sent out from the office of the Secretary of the American Society of Landscape Architects, approximately 1,700 replies were received. It is quite probable that the new Register for this profession, in the office of the Civil Service Commission, will be established about October 1st.

★

DEFERMENT

Application has been made concerning the deferment of architects and landscape architects because of the need for the services of these technical men in National Defense work. It seems quite likely that architects will not be deferred because of the number of architects available for employment, and the comparatively small percentage of this total number who are now actively engaged in defense planning and construction. Because of the limited number of landscape architects who have been engaged in the broader aspects of landscape architecture including site planning for which the landscape architect (because of his training and experience is

especially qualified) there is a possibility that more favorable consideration will be given to the deferment of landscape architects.

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CCC PROGRAM

The personnel of the technical staff heretofore employed in the regional offices and in connection with CCC camps has been greatly reduced because there has been so much increased opportunity for employment of CCC enrollees, and also opportunity for employment of engineers, architects, and landscape architects in private practice and in other government agencies. The CCC is now actively engaged in developing a post-war program and it is reported that this agency is urging the States to employ the necessary technical personnel and to undertake advanced planning on park and recreation areas in order to be prepared with the necessary plans as and when the present emergency is terminated and necessity for the establishment of additional CCC camps develops.

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FUNCTIONS OF ARCHITECT - ENGINEERS

In accordance with instructions issued from the War Department under date of July 22, the Architect-Engineer is requested specifically to perform the following services:

- A—Prepare the necessary topographic maps and the necessary boundary surveys required for land acquisition.
- B—Make the necessary foundation investigations to determine such soil conditions affecting any proposed structures.
- C—Prepare the necessary engineering studies to provide adequate water supply.
- D—Prepare the necessary engineering studies to provide adequate sewage disposal system.

E—Prepare necessary studies to provide adequate power supply system.

F—Prepare necessary engineering studies to determine types of fuel and heating.

G—Prepare necessary engineering studies to provide adequate drainage.

H—Prepare necessary engineering studies for roads and railroads to provide adequate transportation facilities.

I—Prepare necessary studies for lay-out of entire cantonment (site plans).

J—Prepare necessary studies for the landscape development of the entire camp.

K—Make the necessary investigations in connection with the housing problems for construction workers.

A copy of these instructions is available through the Office of the Zone Inspection Quartermasters, the addresses of which were published in a recent issue of PENCIL POINTS.

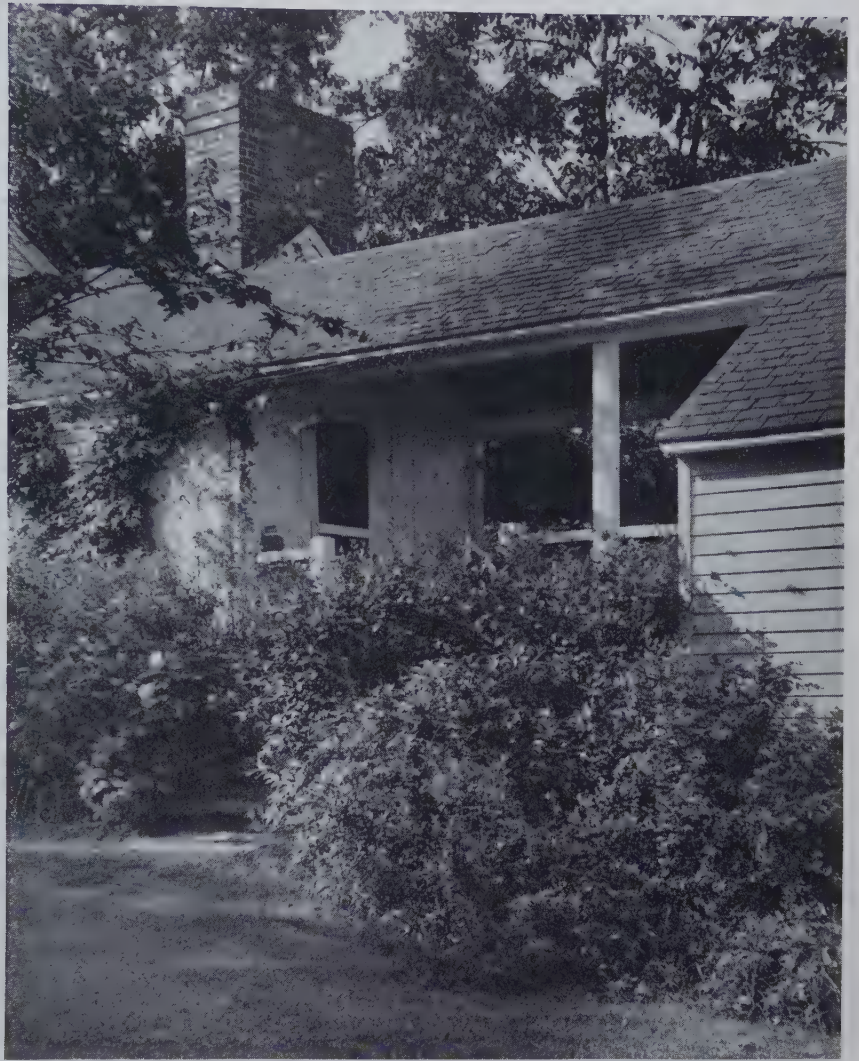
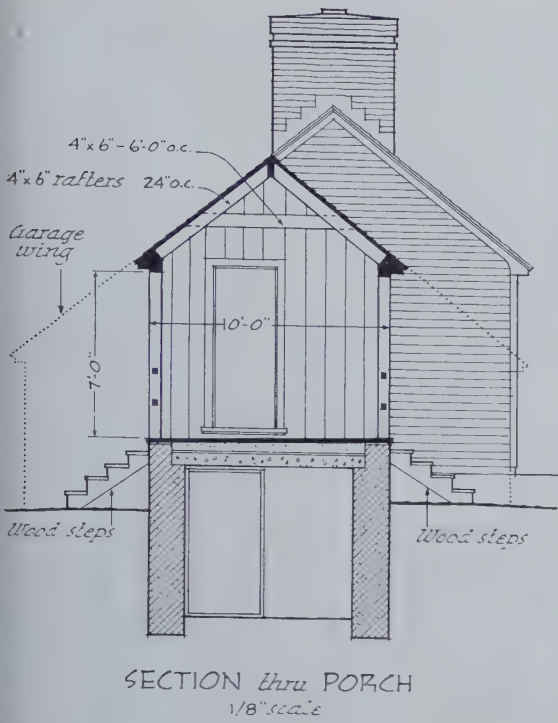
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DEFENSE INDUSTRIAL PLANTS

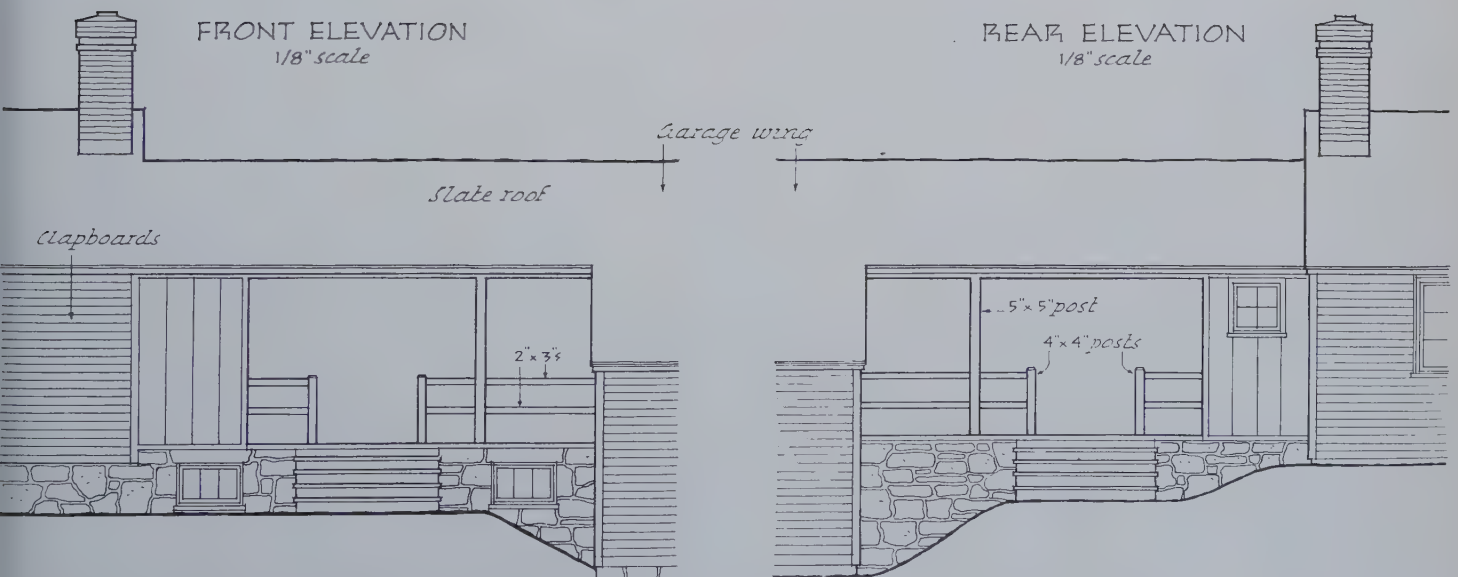
Money has been made available for the construction of new plants and additions to existing industrial plants totaling approximately 214 projects. The largest of these plants includes the following: the Carnegie steel plant at Duquesne, Pa.—\$85,000,000; Ford Motor Co., Ypsilanti, Mich. — \$47,000,000; Wright Aeronautical Corp., Cincinnati, Ohio—\$43,000,000; General Motors Co., near Chicago—\$31,000,000.

These plants are owned by the Defense Plants Corporation. Architects, engineers, and landscape architects, to the extent that such technical services are necessary in the development of any specific project, are employed through the offices of the companies for whose use these plants are constructed.

August 18, 1941



GEORGE H. VAN ANDA

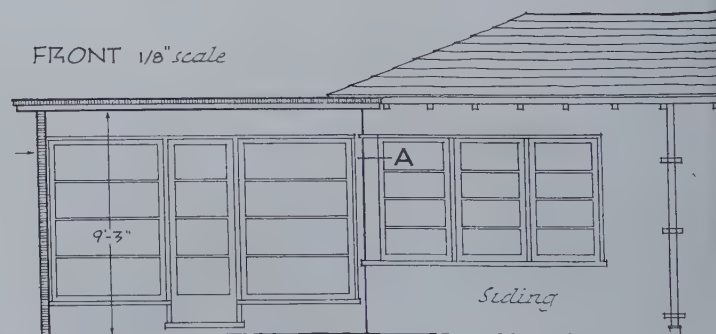
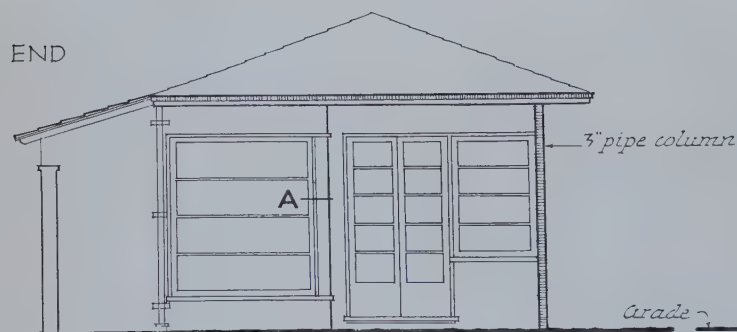
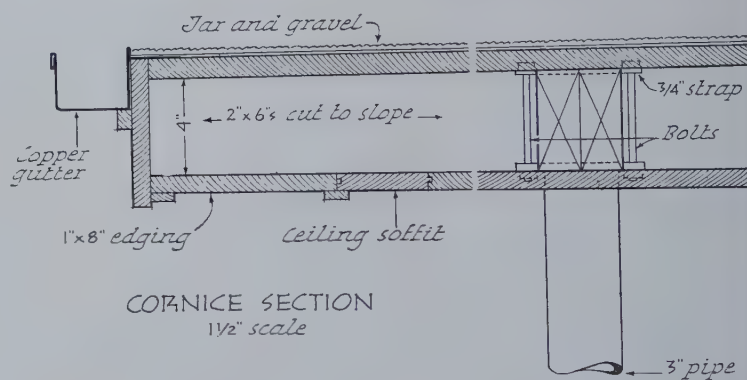
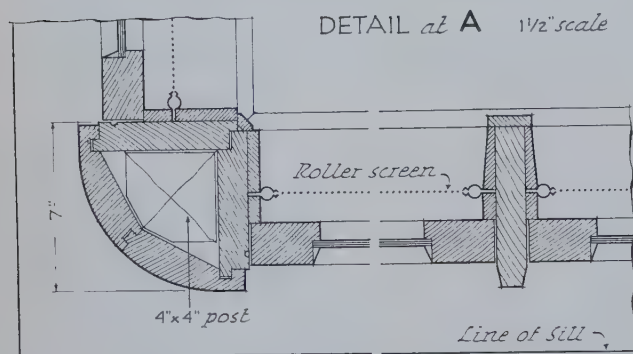


FRANK J. FORSTER Architect

OPEN PORCH



ROGER STURTEVANT

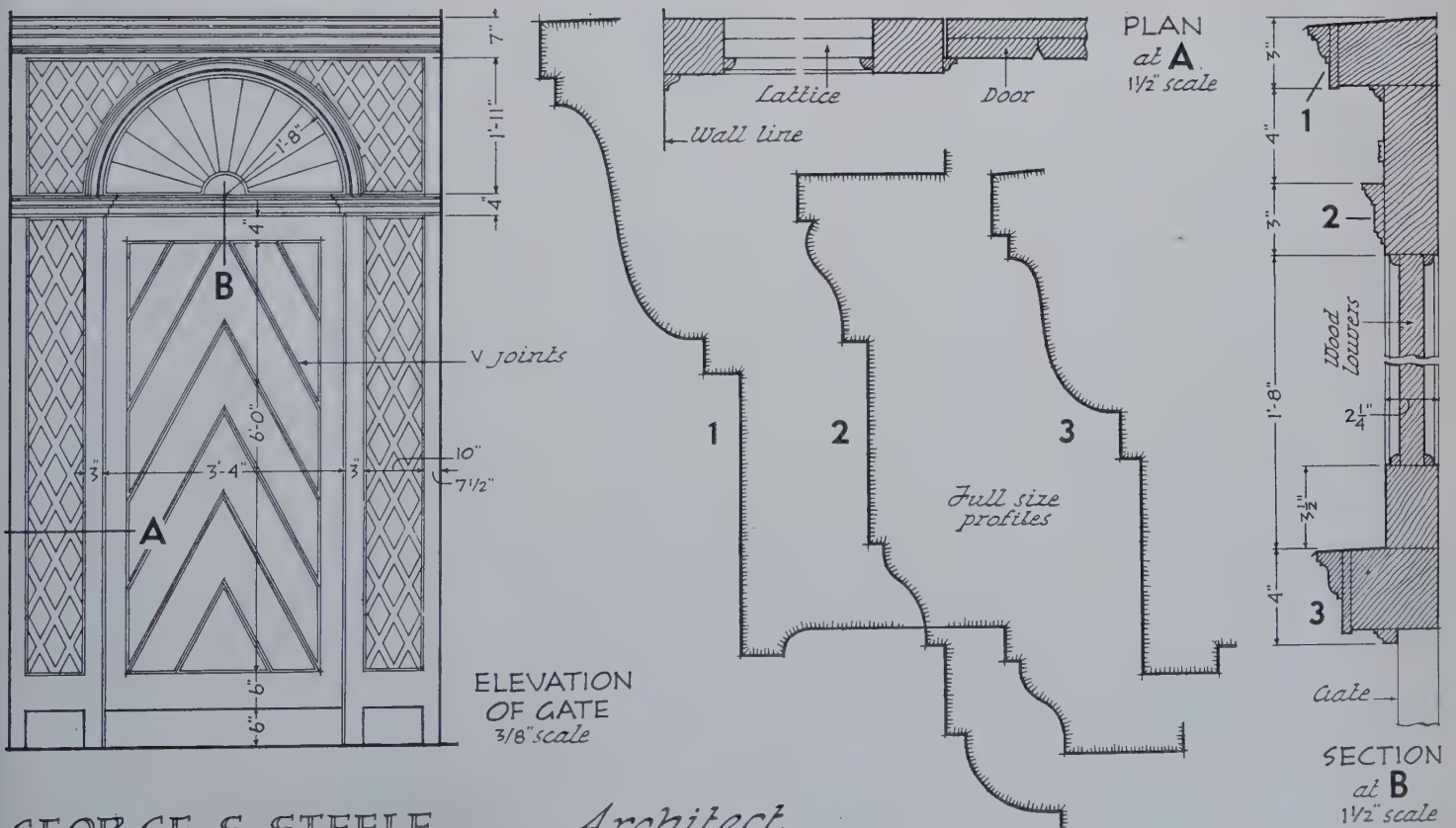


HERVEY PARKE CLARK Architect

A S M A L L S T A B L E

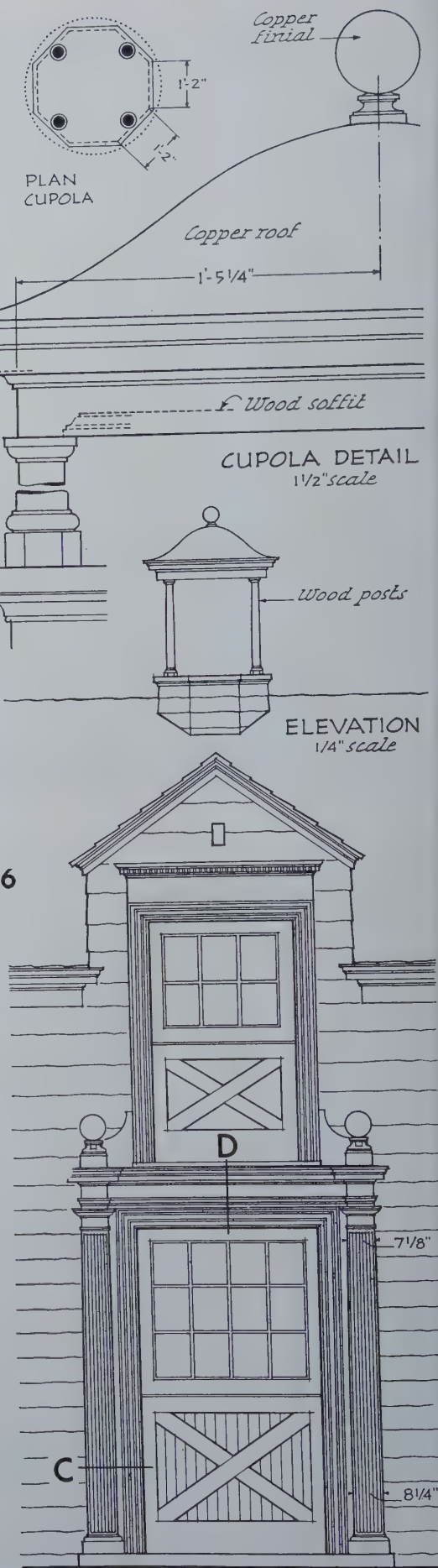
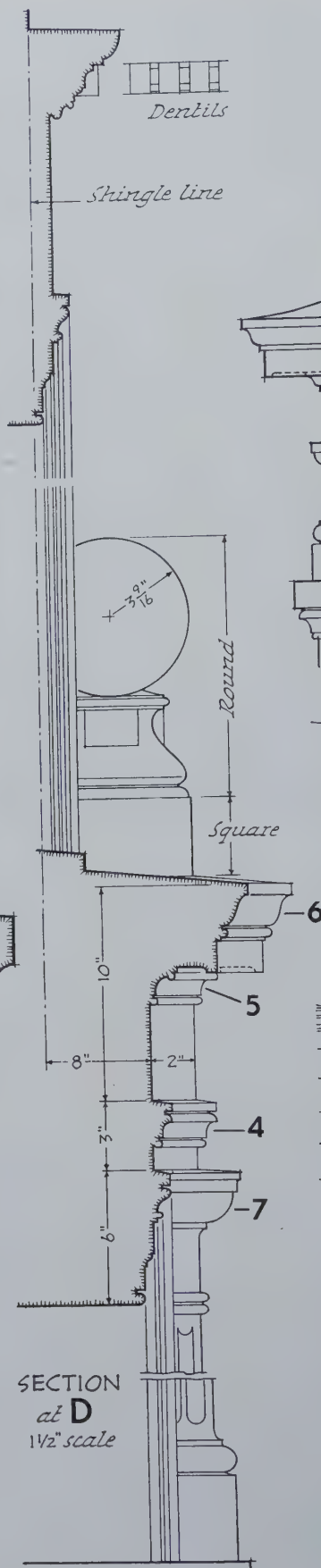
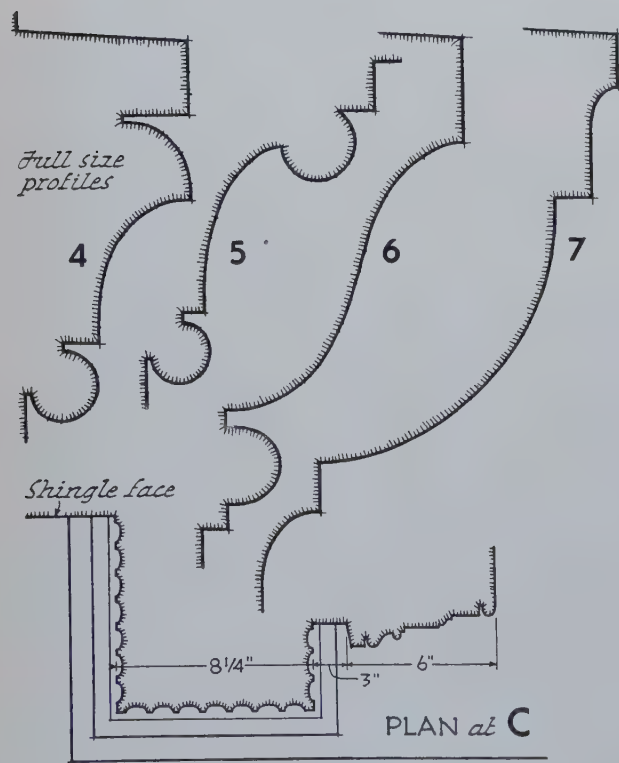


Photos by RICHARD GARRISON



GEORGE S. STEELE . . . Architect

A SMALL STABLE



GEORGE S. STEELE . . . Architect

PENCIL POINTS DATA SHEETS

Prepared by DON GRAF, B.S., M. Arch.

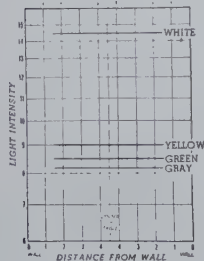
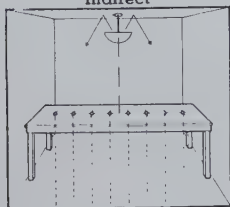
PENCIL POINTS DATA SHEETS

ROOM COLORS AFFECT LIGHTING

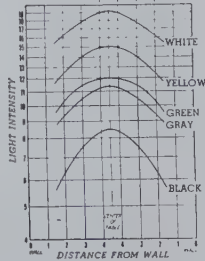
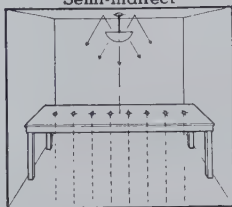
Index No.
E 3 m
MECHANICAL

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

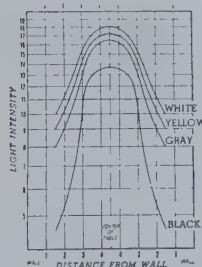
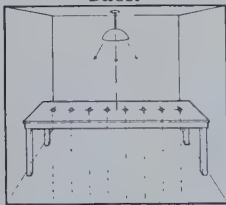
Indirect



Semi-indirect



Direct



It must be noted that these charts are to indicate the principle involved rather than to serve as quantitative guides for design.

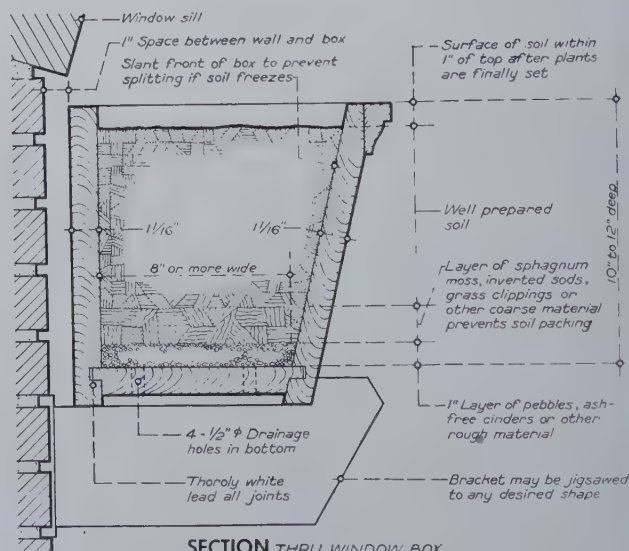
All surfaces absorb some of the light that strikes them. Consequently, the architect will take this factor into consideration when selecting a surfacing material. A black surface absorbs practically all the light that strikes it while a white surface absorbs practically none. An ideal white would reflect 100% of all the light that is directed upon it. Magnesium oxide, reflecting about 98%, generally is used as a standard white by scientific investigators. As this condition is not obtainable in common practice, maximum efficiency must be tempered with a consideration of commercial availability.

The charts in Figures 1 and 2 are indicative of the wide variation resulting from the use of different colors in reflecting surfaces of a room. The colors selected for test are those having an adaptability to business and industrial use under various types of illumination. Basis for the diagrams is a series of tests conducted by the New Jersey Zinc Company technologists, contained in a 16-page booklet titled *Using Paint As Light*.

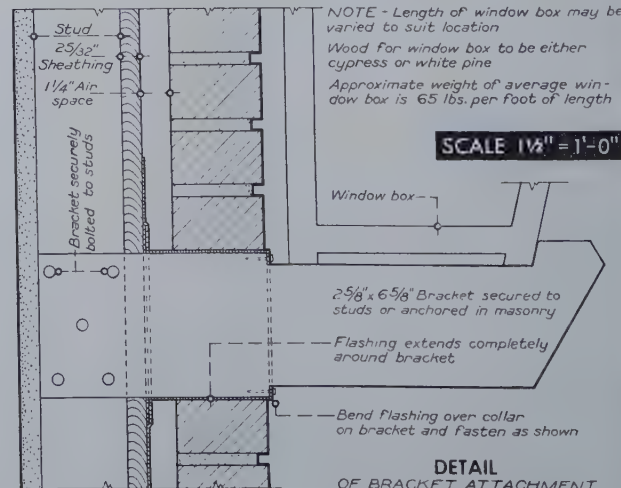
DETAILS OF WINDOW BOXES

Index No.
F 3 s
CONSTRUCTION

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF



SECTION THRU WINDOW BOX



DETAIL OF BRACKET ATTACHMENT

NOTE - Length of window box may be varied to suit location
Wood for window box to be either cypress or white pine
Approximate weight of average window box is 65 lbs. per foot of length

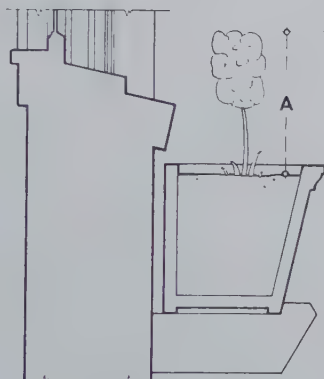
SCALE 1 1/2" = 1'-0"

PENCIL POINTS DATA SHEETS

PLANTING FOR WINDOW BOXES

Index No.
F 3†
CONSTRUCTION

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF



SET 20 SEP 1941 *Ageratum* grows 12 inches or less high, compact with white, blue or purple flowers.

Chinese pink grows about 12 inches high with single or double flowers of white or shades of red.

Sweet alyssum is a spreading plant with white, sweet scented flowers, varying in height from 4 to 8 inches. It blooms continually, covering the surface of the box and trailing over its edge.

Candytuft attains a height of 12 inches and more with upright stalks of white or purplish flowers. It is not a continuous bloomer.

Lobelia grows from 6 to 12 inches high with flowers that are white or shades of blue. It is upright and compact with good foliage; when given plenty of water in hot weather it blooms continually during a long season.

Mignonette grows to a height of 15 inches and more. It is chiefly valuable for its sweet fragrance, altho its greenish-yellow to brownish flowers are attractive though not showy.

Dwarf nasturtiums grow about 12 inches high with large, showy yellow, orange or red flowers. Manure should not be added to the soil for these plants.

Petunias will grow about 12 inches high without support, altho the branches will grow several feet long and if permitted to droop over the edge of the box, make a beautiful showing. They grow best in a warm sunny situation. There are many varieties from white to a rich royal purple.

Verbenas grow less than 12 inches high but the long stems will droop gracefully over the edges of the box. There are white, scarlet and purple varieties which thrive in full sunshine and bloom freely for a long season.

Calliopsis, *snapdragon*, and *helichrysum* or *strawflower* are upright, easily grown annuals that attain a height of 18 inches.

Vines or trailing plants adapted to use in window boxes are *kenisworth*, *ivy*, *wandering Jew*, *Vinca major*, *climbing nasturtiums*, *Ageratum rostrata*, *Asparagus sprengeri*, *Ficus pumila* and *English ivy*.

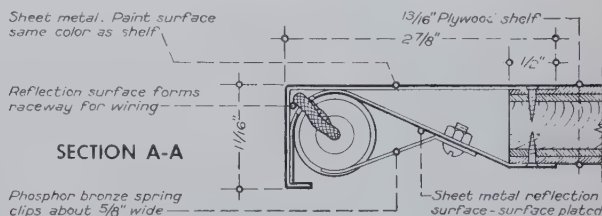
Porch and outdoor window boxes planted with evergreens may be used effectively. More permanent appearing and dignified summer effects may often be obtained by evergreens, especially in connection with more formal buildings. They are the only plants that can be widely used for winter effects.

See U. S. Department of Agriculture Mimeographed Leaflet "Porch and Outdoor Window Boxes."

MYSTERY LIGHTING FOR BOOKCASE

Index No.
F 18 a
CONSTRUCTION

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

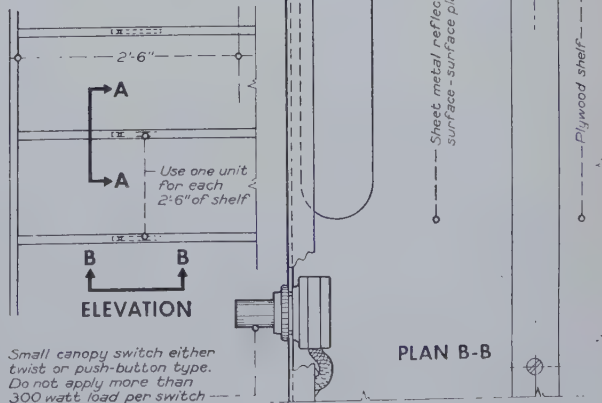


SCALE-HALF FULL SIZE

Intermediate molded Christmas tree sockets, with 25 watt T 6 1/2 tubular lamps

Phosphor bronze spring clips about 5/8" wide

SET 20 SEP 1941 This is a very interesting method of bookcase lighting since the source of light is not visible and the book backs are apparently illuminated from nowhere. The edge of the lighting trough is finished to match the rest of the case and it is not apparent that this edge conceals the light sources. With a pilaster or return on the vertical edge to conceal the wiring the shelves may even be made adjustable.



PUBLIC RELATIONS

A FORUM EDITED BY D. KNICKERBACKER BOYD

So imperative is the need for better public relations that even the summer months have seen an augmented surge toward securing not only the cooperation of the public but, which is more important, of the architects themselves. The Chairman of the Institute's Committee on Public Information went from Detroit to New York to attend one of the summer meetings of that Chapter's Committee.

The Editor of this Section has noted a distinct increase in interest in P.R. as reflected in recent correspondence and hopes to receive many more letters. Any thoughts prompted by the article last month by Walter Hagedohm or by the report of the San Francisco Exhibit or by the article this month by Hal Burnett on "Getting Down To Business" will be welcomed.

A fine demonstration of activity is being given by the new A.I.A. Middle Atlantic Regional Director. Frederick A. Fletcher has started sending a Bul-

letin to the officers of all Chapters in his district. In his first issue (August) it is gratifying to see:

"Public Relations"

"Permit me to refer you to this section running in PENCIL POINTS. Quite by accident, I have learned of two cases where material in this section has proved of definite value to organizations in our district in connection with a local problem. If I know of two cases there must be others about the country. This section can be an agency for great good. I favor it highly. For years we have heard the cry 'it is useless to start anything designed to help architects; they won't support it.' I have seen this proven wrong in several cases in the last few years. Architects are waking up and when they do start they can certainly deliver. Send some material to the above section. If you or your Chapter are not interested personally, do it on the theory that it may help some other individual or Chapter. Public relations are tremendously important. Back this movement. You may direct your material or communication to the Editor of this section."

D. KNICKERBACKER BOYD

No. 4 South 15th St., Philadelphia, Pa.

PUBLIC RELATIONS IN NORTHERN CALIFORNIA

In collaboration with the officials of the State Association of California Architects, Northern Section, Philip Soljak, their Public Relations Representative, has inaugurated many new activities. The Section is also issuing a series of News Letters emphasizing the necessity for member cooperation.

He writes, "I have followed each of your excellent Sections in PENCIL POINTS with great interest . . . they have been most helpful to us in our program. Talmadge Hughes, whom I also met at Yosemite, has meanwhile asked us to send him a summary of our ideas on public relations and I shall send you a copy of our statement. I would appreciate it if you could publish a word or two discouraging groups from employing paid media in the initial stages of their programs. Over-optimistic expenditure at the start has wrecked many a fine venture and prejudiced future effort. More important is the employment by each group of a professional public relations representative who can help them develop their program."

"THIS BUSINESS OF ARCHITECTURE"

"The changing world has banished iron-clad traditionalism and introduced to the architect a host of competitors in the realm of pure and impure business. Because of sacrosanct decades of defenseless immunity his back is more nearly to the wall than he realizes, but he has the best of arguments for his continued existence will he but galvanize himself into an intelligent aggressiveness. Architecture has become, for all practical purposes, a business which retains professional supervision as its inheritance from earlier years, and the modern client's confidence in the architect is the greater for knowing him to be a businesslike individual."

Royal Barry Wills

From this selected paragraph one may sense the tenor of the contents of the new book with the title given to this heading. It is full of practical suggestions in connection with running an office, and above all the securing of clients. All architects should read it for, summed up, it is a fine contribution to a public relations program for individuals as well as for organizations.

NEW YORK CHAPTER RECEIVES P.R. REPORT

The New York Chapter A.I.A., as before stated (May Issue, page 45) appointed a Public Relations Committee to make a study and formulate a procedure for presentation to the Chapter.

This Committee employed a firm of Public Relations Counsel to prepare a comprehensive report on the subject. At a special meeting of the Chapter members, held on June 24th the Committee presented a summary of the Report.

A reading of the summarization would seem to indicate that hardly any activity was included that had not been covered in detail in the seven page article, entitled "Popularizing the Profession with the Public and with Itself," in the January 1932 issue of PENCIL POINTS—and many activities that were so well outlined in the 1939 report of the A.I.A. Committee on State and Municipal Public Works.

Meanwhile, as stated at the conclusion of this summary; "The Complete Report is available at the Chapter office to all A.I.A. members who care to read it in detail."

GETTING DOWN TO BUSINESS

BY HAL BURNETT

Architects are on the spot.

Thanks to the spotlight of the defense emergency, they are becoming genuinely worried about the future of their profession. A few leaders are facing their critical business problems alertly, objectively, and vigorously.

But war has caught the majority of the architects—like the democracies—asleep in a 1914 world, totally unprepared to meet and master the various streamlined, panzer-like movements that have rolled in to capture the cream of building profits. The few architects—in widely-scattered sections—who are awakening may lead the entire profession from its lethargy, and galvanize it into dynamic, co-operative action.

Meanwhile the rest simply grumble about the groups that threaten their business:

Industrial Designers—constantly slicing large shares in the profits from commercial building. "We know merchandising," they say. "We'll get you business." They even employ architects to execute minor "structural" details.

Jerry Builders—long poison to architects, and to the public, getting an ever-increasing slice of the housing market with their glib argument, "Why pay 10 per cent *extra* for an architect? We'll sell you plans for \$25. We'll even give them to you!"

Engineer-Contractors—super firms of the "soup to nuts" pattern, who boldly advertise, "We'll do the whole job, get your plant done on time, and you'll know what it costs before you start." Why should they admit that a qualified architect can build better, faster, more economically, and for longer life?

Corporations—The chain stores, mail order houses, and industrial plants that boast their own drafting and architectural departments, who insist they can build better, cheaper,

more efficiently themselves. Seldom do these corporations hesitate to summon architects to "doll up" a mediocre job with a super-imposed facade. The architect's fee, of course, is based on this incidental, "extraneous ornament."

Stock Plan Peddlers—the glamorous home-building pulp publications that promise, "All this and heaven too" for only \$800.98. Wait until you try to duplicate that dream house in your own locality, with or without the help of a contractor.

Government Agencies—the politicians who, in the pressure of defense, awarded million dollar projects to general contractors with the flippant observation, "Architects? Employ any firm you wish."

Yes, a popular sport these days is damning these super-enemies of the architectural profession. The architects say, "Start a boycott. . . . Somebody ought to pass a law. . . ." But eventually the fire burns low, the last Scotch is drained, and once again the average architect slips back into slumber.

For few are the architects who will admit that they are their own worst enemies . . . that they, like the French, have been lulled to complacency behind a Maginot line of tradition.

Few are the architects who realize that the business world—especially the selling and advertising fields they so carefully avoid—has in the last decade undergone a revolution even more complete, more dynamic than those in materials and design. It is this revolution—in sales promotion, public relations, consumer education, and advertising—that has armed the industrial designer, the jerry builder, the engineer-contractor, and the stock-plan-peddler to snare the architect's building dollar so successfully.

Today—as defense construction subsides and as priorities tighten on private construction

—architects are beginning to worry, to ask. . . . “How are we going to meet this stiffening competition in the future? What can we do?” And suddenly there is a widespread interest in public relations, in publicity, in advertising, in practically anything—ethical or unethical—that promises any hope of new business.

Unfortunately, publicity and advertising—alone—are no solution to the architect's problem. They are only the means of telling the architect's story.

The real solution lies in gearing the architect's methods of doing business to a 1941 model business world. This does not mean abandoning professional ideals, or professional ethics. It does mean awakening to the fact that architecture is both profession and business: that architects can, and must, be both professional men and business men. If not, they might as well retreat, leaving the building field open to those jerry builders, the industrial designers, the engineer-contractors, who are using every modern sales promotion method to get business, and profits, at the expense of the architects.

What can the architects do? Answer—organize!

Through the American Institute of Architects, or through a larger, broader organization, create a dynamic, effective agency for increasing the total volume of building done by architects. The American Bar Association, the American Dental Association, the American Meat Institute, and the Plumbing and Heating Industries Bureau are working examples of professional and industrial co-operation that is getting results.

First, organize; second, finance—then get down to business with an ethical but militant program of public education and group sales promotion that will build public confidence in architects, and increase their total volume of building. This program must include public opinion and market research; statistical and cost research; public relations planning and new standards of professional practice; consumer education; publicity; group advertising; and individual sales promotion and publicity.

PUBLIC OPINION

A Gallup, a Starch, a Roper, or a Nielson should turn the spotlight of public opinion on every phase of architectural practice. Why do some people build without architects? Do they consider the architect a luxury or a necessity? Are there careless or unethical practices that drive away business? What public misconceptions prevent the

fullest utilization of the nation's resources in solving the vast housing problem?

COST RESEARCH

Facts—concrete specific facts—will combat the subversive half-truths that destroy confidence in architects. Do architects build economically, or extravagantly? Unbiased agencies, public and private, perhaps universities, should appraise the original cost, maintenance cost, resale value of hundreds of homes and buildings. Honest, factual research will provide all architects with the ammunition to do an intelligent selling job against their non-professional competition. Research may reveal some ugly truths. Perhaps the architect cannot operate profitably in the small home field, cannot sell against mass-production methods. If so, he should face the facts, find ways to work with the mass builders (perhaps on royalties) and help to improve the appearance, comfort, and value of their work.

PUBLIC RELATIONS

Research will suggest new standards of professional practice, new business methods . . . standards that the entire profession will accept and follow . . . standards that can be enforced and sold to the public. They must cover every phase of the profession's relationship with the public, with contractors with material suppliers, and with non-professional competitors.

The profession might adopt a seal certifying that every plan, every building upon which it is placed meets these high standards. This seal could be widely publicized as the hallmark of professional work of the highest calibre. It can become, like the tag of the Walnut Association, self-policing.

EDUCATION

Few people outside of the profession have any concept of the architect's varied professional and business functions; of the multitude of essential services that he alone performs; of the nature of his professional relationship with his client. The architect must use every potential national, local, and individual means of educating the public to a true conception of the profession. Schools, colleges, conventions, exhibits, women's groups, consumer groups, government agencies, material suppliers, business associations, realtors, and contractors can all provide channels for well-directed education.

GROUP PUBLICITY

There is nothing about group publicity and even advertising that is incompatible with

the highest professional ethics. Every publication, radio, and film channel—nationally and locally—can help carry the educational message of the architect, if it is told in interesting news fashion. And, when local circumstances are favorable, paid advertising can be used to produce concrete sales results as it has in Southern California. The wisdom and ethics of paid advertising by individual firms is debatable. But bars against publicity for the work of individual firms should be relaxed. For every picture, every story publicizing the work of individuals can, if intelligently and honestly handled, benefit the profession, as well as the public.

SALES PROMOTION

It's trite to say that the chain is as strong as its weakest link. Yet all group activity in the profession will fail if the individuals do not co-operate by observing rigidly the standards of professional practice, and by using every useful bit of sales ammunition in daily contacts. Follow-through, by individuals, demands sounder business and sales training in architectural schools; more books like Royal Barry Wills' *This*

Business of Architecture; more trade and professional magazine features like PENCIL POINTS' *Public Relations* section. And architectural groups and trade papers should make available more and better selling aids—booklets, charts, slide films—that will help individual architects do a better personal selling job.

The possibilities for businesslike expansion of the architectural profession's total income are virtually unlimited. Only leadership, co-operative action, financing, and professional public relations, publicity, and sales promotional counsel are needed. Certainly a profession that is doing such brilliant creative work is not lacking in leadership. Certainly the time is appropriate for financing—when current business is good, future business clouded. Certainly every major city can produce competent, professional public relations men to plan and execute local campaigns. The only bottleneck is delay in co-operative action.

Most critics of architects say that you are temperamental, individualistic artists, who cannot get together on anything. There's a challenge. You recognize your problems. Let's see you lick them.

"... When the time comes to rebuild the bombed cities, wherever possible it will be done by architects who know town-planning, and not by contractors looking for quick jobs and quick profits."

RAYMOND GRAM SWING
in his broadcast of July 29th, regarding the post-war period in Britain

THE ABC'S OF FLUORESCENT LIGHTING

BY JOHN T. BAILEY

No one will maintain that fluorescent lighting is not new and different. In fact, some have said that it is too new and so different from present lighting that a period of adjustment must be endured while its merits are substantiated and its disadvantages are uncovered. Such a period of adolescence for the lamps is producing some growing pains. But if the demand for fluorescent lamps and the many creditable installations in operation today are any indication that the new light source is becoming of age, then now is the time to review fluorescent lighting.

The purpose of this article is not to prophesy or predict future trends but merely to present an unprejudiced, non-commercial compilation of facts and comparisons of fluorescent light sources so that an analysis of a particular fluor-

escent lighting problem can be made quickly and confidently.

FLUORESCENT LIGHT SOURCES

An incandescent type of lamp produces visible light directly by heating of the filament to incandescence at a temperature near the melting point of the metal, usually tungsten. In the fluorescent types of light sources an arc between electrodes at opposite ends of the lamp produces invisible ultraviolet energy which is transformed into visible light by phosphors with which the inside of the lamp glass is coated. By the selection or mixture of the proper phosphors almost any color of light can be obtained. There are two general classifications of fluorescent light sources available—fluorescent *lamps* and fluorescent *tubing*.

FLUORESCENT LAMP DATA

	Lamp Wattage								
	6	8	14	15	20	30	40	65	100
1. DIMENSIONS									
a. Bulb diameter	5/8"	5/8"	1 1/2"	1"	1 1/2"	1"	1 1/2"	2 1/8"	2 1/8"
b. Length, includ. sockets	9"	12"	15"	18"	24"	36"	48"	36"	60"
c. Base*	Min.	Min.	Med.	Med.	Med.	Med.	Med.	Mog.	Mog.
2. APPROX. INITIAL LUMENS at 100 hrs.									
a. 3500° white	180	300	460	615	900	1450	2100	2100	4200
b. Daylight	155	250	370	495	730	1200	1700	1800	3350
c. Soft white			325	435	640	1050	1500		
d. Blue				315	460	780			
e. Green				900	1300	2250			
f. Pink				300	440	750			
g. Gold				375	540	930			
h. Red				45	60	120			
3. APPROX. BRIGHTNESS in foot-lamberts									
a. 3500° white	2450	2440	1300	2150	1650	2475	1750	1530	2180
b. Daylight	2100	2030	1050	1750	1350	2050	1400	1310	1750
c. Soft white			920	1550	1200	1800	1250		
d. Blue				1125	850	1350			
e. Green				3200	2400	3900			
f. Pink				1050	800	1300			
g. Gold				1650	1000	1600			
h. Red				160	110	210			
4. OTHER DATA									
a. Lamp current—amperes	0.15	0.18	0.37	0.30	0.35	0.34	0.41	1.35	1.45
b. Lamp volts	45	54	41	56	62	103	108	50	72
c. Rated av. life in hours	750	750	1500	2500	2500	2500	2500	2000	2000

* Min. = Miniature Bipin. Med. = Medium Bipin. Mog. = Mogul Bipin.

Fluorescent lamps may be broadly classified as hot-cathode, low voltage sources—as contrasted to the cold-cathode, high voltage fluorescent tubing.

FLUORESCENT LAMPS are individual standardized light sources ranging in size from $\frac{5}{8}$ " to $2\frac{1}{8}$ " in diameter and 9" to 60" long, equipped with a two-pin base on each end, burning in any position. These lamps have been used mainly for general illumination and high-level supplementary lighting installations.

FLUORESCENT TUBING is the familiar "neon sign" tubing with fluorescent phosphors coated on the inside of the glass. It has been used chiefly for electrical advertising but is now entering the field as a competitor to fluorescent lamps in applications where its characteristics are considered more advantageous than those of fluorescent lamps.

The following discussion of the operating characteristics of fluorescent light sources will be helpful in comparing the merits, and disadvantages too, of fluorescent lamps and tubing.

VOLTAGE—Fluorescent lamps and tubing are not offered in standard voltage ratings of 110, 115 and 120 volts as are incandescent lamps, because within their normal operating ranges they are not so sensitive to voltage variations as are the incandescent lamps. In order to use fluorescent lamps on higher voltages, such as the 199-216 or 220-250 volt ranges sometimes encountered in industrial plants, the same lamps are used but the proper control equipment must be selected to match line voltage.

FREQUENCY—Fluorescent lamps and tubing may be operated on any of the usual supply line frequencies, such as 50 or 60 cycles per second, provided that the control equipment is designed for the particular frequency used.

D. C. OPERATION—Fluorescent tubing cannot be operated on direct current. Fluorescent lamps are designed for operation on alternating current but the 15 and 20 watt lamps may be operated on direct current, at reduced efficiency, by using a resistance of proper size connected in series with each ballast. A thermal type starter should be used. This equipment is discussed further under *Control Equipment*. Operation of the 30, 40, 65 and 100 watt lamps is not recommended on d.c.

AMBIENT TEMPERATURE (*Ambient* means "Surrounding")—Fluorescent lamps and tubing are designed to give best performance when the surrounding temperature is within the range of 60° to 90° F. The protection offered by a reflector is often sufficient to eliminate draft effects and to trap enough heat around the lamp to assure satisfactory operation in cold weather. The manufacturers of fluorescent lamps, generally, do not recommend their use in weather below 50° F. but advise that with proper precautions, such as thermal type starters and enclosed fixtures and a line voltage in the upper half of the control rating, satisfactory starting and operating may be obtained down to 32° F. For temperatures be-

MERCURY TUBING DATA

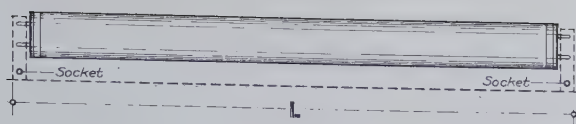
Color	Tubing dia.	Lumens per foot		
		30 Ma.	45 Ma.	60 Ma.
Warm white	10 mm.	174	—	—
	12	158	222	275
	15	139	203	260
	18	—	—	251
White	24	—	—	230
	10	167	—	—
	12	152	214	265
	15	134	196	250
Daylight	18	—	—	244
	24	—	—	220
	10	142	—	—
	12	129	181	224
Green	15	113	165	211
	18	—	—	200
	24	—	—	183
	10	289	—	—
Deep green	12	263	370	458
	15	231	338	432
	10	168	—	—
Gold	12	154	214	264
	15	145	202	248
	10	130	—	—
Cream white	12	124	176	219
	15	117	164	202
	10	212	—	—
Blue	12	184	269	321
	15	162	246	303
	10	88	—	—
Blue	12	80	112	139
	15	70	102	131

NEON TUBING DATA

Color	Tubing	Lumens per foot		
		30 Ma.	45 Ma.	60 Ma.
Old gold	10 mm.	99	—	—
	12	93	123	144
	15	70	96	114
Rose	10	107	—	—
	12	79	105	125
	15	67	94	115
Orange	10	102	—	—
	12	73	99	106
	15	45	66	80
Ruby rose	10	16	—	—
	12	11	14	17
	15	10	13	16

low freezing the results are unpredictable. Fluorescent tubing, when designed for outdoor operation, is not so sensitive to cold weather as are the fluorescent lamps.

COLOR—Most fluorescent lamps and tubing are white when not lighted. When operated they produce a color of light which is determined by the particular phosphors used within the lamp. These light sources are exceptionally efficient in the production of colored light as compared to incandescent sources. With incandescent lamps the desired color is obtained by filters. Colored light from fluorescent sources is produced directly—sometimes at greater efficiencies than the "white" lights.



Lamp Wattage →	6	8	14	15	20	30	40	65	100
Nominal Length L	9"	12"	1'-3"	1'-6"	2'-0"	3'-0"	4'-0"	3'-0"	5'-0"
Diameter	5/8"	5/8"	1 1/2"	1"	1 1/2"	1"	1 1/2"	2 1/8"	2 1/8"
WHITE	•	•	•	•	•	•	•	•	•
DAYLIGHT	•	•	•	•	•	•	•	•	•
SOFT WHITE			•	•	•	•	•		
PINK				•	•	•			
GOLD				•	•	•			
GREEN				•	•	•			
BLUE				•	•	•			
RED				•	•	•			

COLORS, WATTAGES OF FLUORESCENT LAMPS

Of the many colored lights available with fluorescent sources, the whites (if white may be called a color) represent the greatest demand for the usual applications. Since red light has not been satisfactorily produced by fluorescent phosphors as yet the "white" lights are deficient in this part of the visible spectrum and noticeable color discrepancies in the appearance of merchandise, interior furnishings, human complexions and food are to be expected. A small amount of mercury light also filters through the phosphors and creates undesirable emphasis of certain colors.

These color short-comings of fluorescent light sources make it imperative that the selection of color schemes be given careful consideration.

Fluorescent lamps are offered in two whites (3500° Kelvin white, and soft white) and a daylight. None of these or any combination of them is a good match for the mellow, yellowish-red spectrum of incandescent lamps to which the public has become accustomed.

The color of light of fluorescent lamps does not change throughout lamp life nor does it change with variations in line voltage.

EFFICIENCY—Fluorescent lamps produce about 3 1/2 times as much light for their wattage as incandescent lamps. However, the wattage consumed by the control equipment must be included in the over-all efficiency calculations and will reduce this figure to around 3. This means that theoretically a given light bill can be reduced to about 33% of its former value. In practice, a reduction to only about 50% can be obtained. Both fluorescent and incandescent lamps increase in efficiency with an increase in wattage. Since low wattage fluorescent lamps usually replace high wattage incandescent lamps, the difference in efficiencies reduces the apparent savings.

COOLNESS—The efficiency of light generation by fluorescent lamps is about double that of incandescent lamps and the radiated (not convected or conducted) heat is about one-half that of incandescent lamps. As a result, fluorescent lamps produce a heat sensation only one-fourth as great as incandescent lamps for the same amount of illumination. However, when figuring air-conditioning loads the actual wattage of the lamps plus the power lost in the control equipment must be used. This figure will be about one-half that for incan-

descent lamps for the same amount of illumination. The fluorescent lamp or tubing itself operates at a comparatively low temperature which never exceeds a heat that is uncomfortable to the touch.

BRIGHTNESS—Fluorescent lamps have a greater surface area through which the light is emitted than do equivalent sizes of incandescent lamps and therefore the brightness per square inch of surface is smaller and reduces glare. In the same way, the one-inch diameter lamps are brighter per unit of area than the 1 1/2" diameter lamps.

LIFE—The rated life of fluorescent lamps is based on the average obtained from a large number operated under specified conditions. In addition to the number of hours burned, the life of a lamp is determined by the number of times it is turned on and off. For this reason, a fluorescent lamp will give unsatisfactory life if operated on a flasher for sign service. Approximately four hours' burning for every time the lamp is turned on is considered the minimum starting-burning cycle to assure an average rated life.

Sooner or later fluorescent lamps blacken at the ends of the glass directly adjacent to the base. When this normal discoloring is objectionable from an appearance standpoint, the ends or the entire lamp should be concealed from view by a diffusing glass or plastic shield.

Fluorescent tubing is not affected by frequent starting and stopping and therefore may be flashed if desired. Fluorescent tubing has an exceptionally long life, somewhere within the limits of 10,000 and 20,000 hours. While the average life values are not available, some manufacturers guarantee individual lamp lives at various values ranging from 5,000 to 10,000 hours.

LUMEN MAINTENANCE—The rated "initial" lumen values for fluorescent lamps are given by the manufacturers as applying after 100 hours of service. The actual initial lumen values are as much as 10% higher during this "stabilizing" period. At the end of the rated life, the light output will drop to around 85% of the lamp's output at 100 hours of life. Throughout the lamp's life the average light output is approximately 90% of its rated initial efficiency.

STROBOSCOPIC EFFECT—The flicker encountered in using fluorescent lamps and tubing is inherent in the operation of all light sources, including incandescent lamps, when working on alternating current, but not when direct current is used. When minimized by the use of two-lamp ballasts, flicker with fluorescent lamps is reduced to a negligible factor.

RADIO INTERFERENCE—Electrical disturbances may be picked up by a radio within a radius of eight or ten feet of a fluorescent lamp despite the usual precautions included in the control equipment to minimize this trouble. There is little the architect can do to assure his client of interference-free radio reception except to write into the electrical specifications that the contractor shall be responsible for the elimina-

STARTERS

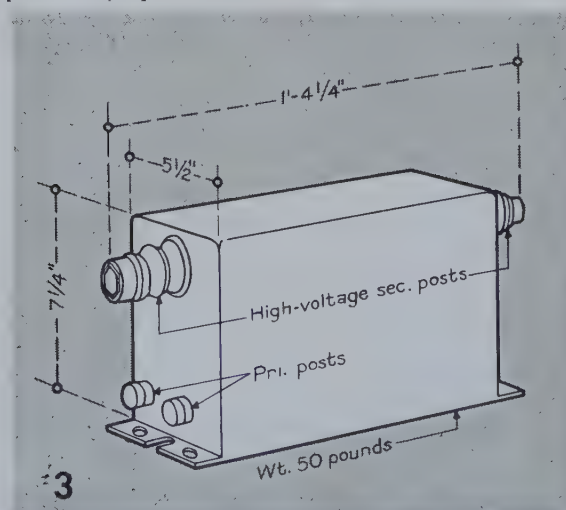
Designation	For Lamp Sizes	No. of Contacts	Approx. Dimensions
FS-2	15 and 20 watt	2	13/16" D x 1 1/2" L
FS-4	30 and 40 watt	2	13/16" D x 1 1/2" L
FS-5	6 and 8 watt	2	13/16" D x 1 1/2" L
FS-6	100 watt	2	1" D x 2" L
FS-64	100 watt	4	1" D x 2" L
FS-7	65 watt	2	1" D x 2" L
FS-74	65 watt	4	1" D x 2" L
Manual type	14 watt	—	—

tion of interference, if any, produced by either the fluorescent lamps or their control equipment. It might be well to include such a clause in the specifications to cover fluorescent tubing installations too, although interference from tubing is not common and usually can be traced to defective equipment. In either case, when trouble is encountered, a competent radio service-man can solve the problem.

DIMMING—Fluorescent tubing but not fluorescent lamps can be dimmed with the usual equipment for this purpose when special effects are desired. Dimming to only about 25% of normal light output is possible with an accompanying shift in color as the illumination is reduced.

LIGHT MEASUREMENT—Light meters are available now equipped with filters to correct the readings for the various colors encountered with fluorescent light sources. If a filter is not used, correction factors should be applied as recommended by the meter manufacturer.

MECHANICAL NOISE—The slight normal "hum" inherent in all reactors and transformers may be noticeable and objectionable unless attention is given to the mounting and location of the fluorescent lamp control equipment. In applications involving many lamps where individual hums may become cumulative—as in quiet interiors, libraries, hospitals or residences or where hum may be amplified due to resonance—special cushioned mounting of the ballasts may be required or possibly the location of this equipment outside the quiet area may be the simpler solution. Transformers used with fluorescent tubing are comparatively quiet.



TYPICAL TRANSFORMER FOR FLUORESCENT TUBING

CONTROL EQUIPMENT

For fluorescent tubing one special type high voltage transformer is required for approximately every 70 feet of tubing, the exact number of lineal feet of fluorescent tubing served by one transformer being determined by the diameter of tubing, the gas used within the tubing, the number of pairs of electrodes involved, the voltage of the transformer and the current drain of the tubing. No preheating operation is necessary to start the fluorescent tubing.

Each fluorescent lamp requires control or auxiliary equipment especially designed for its operation. The control equipment for each fluorescent lamp consists of two devices, a *ballast* and a *starter*. This equipment serves three important functions, in order of sequence: 1. Preheats the cathodes to make available a large supply of free electrons; 2. Provides a surge of relatively high voltage to start the arc discharge; 3. Prevents the arc current from increasing beyond the limit for each size lamp.

STARTER—The starter is an essential part of the control equipment for each fluorescent lamp but is not required for fluorescent tubing. Essentially, it is a time-delay switch which causes the cathodes to be heated prior to the establishment of the arc within the lamp. Several different types of starters have been developed since the advent of the fluorescent lamps but the type in general use now is the glow-switch.

A new type of starter having 4 contacts is now available for 65 and 100 watt lamps. This unit gives promise of more reliable starting and insures better lamp life than with the 2-contact starters. It requires a 4-contact socket which will accommodate either the 2 or 4-contact starters.

One manufacturer features a line of starters similar to those listed above except that they are designed to facilitate quicker restarting and to work satisfactorily on direct current.

Sockets to hold the starters are made in a number of styles. The most common type is one which connects to one of the lamp holders under one end of the lamp where it is readily accessible for replacement. The FS-2, FS-4 and FS-5 fit the same socket. The FS-6 fits the same socket as the FS-7. The FS-64 fits the same socket as the FS-74.

Included in the starter case is the bypass condenser used to minimize radio interference from the lamp as well as from the starter contacting.

Most stock fluorescent lamp fixtures available at the present time are furnished with the

proper starter installed so that only when lighting effects using fluorescent lamps built into the architectural treatment of the interior are used will it be necessary for the designer to select the starter type and allow sufficient accessible space for its mounting. When conditions require that the control equipment be remotely located it will be found more satisfactory to mount the starters at their respective lamps and to locate the ballasts wherever convenient since the space required by the starters is not great and the wiring will be simplified by the procedure.

The glow-switch type starters consume no power while the lamps are operating and the thermal type, recommended for certain applications such as cold weather and direct current operation, consume a very small, usually negligible, amount of power.

BALLASTS—The ballast, serving the second and third functional steps in the operation of the lamps as listed above, usually consists of a choke coil or a combination of a choke and condenser. Therefore, compared to the starter, the ballast is a relatively bulky and heavy piece of equipment. Many circuits, devices and compromises have been developed to minimize the inconveniences which the ballasts bring about but no encouraging results are evident yet. In fact, the large number of ballasts available to serve even the commonly used sizes of fluorescent lamps is confusing to the designer. Fortunately, nearly all stock fluorescent lamp fixtures are equipped with the proper ballasts to comply with electrical codes, utility company requirements and to serve the interests of the owner most economically. But when special equipment is designed, as is frequently the case in an architect's office, a working knowledge of ballast equipment and starters is required.

A two-lamp ballast should be used for each pair of same size fluorescent lamps which are always operated and located together—as in the same fixture or end to end in a cove. For single lamps removed from each other or lamps on separate switches, high power-factor single-lamp ballasts should be used. Without getting involved in a complicated discussion of what power-factor is, there is now no important disadvantage in using high power-factor equipment but there are many advantages.

Two-lamp ballasts consist essentially of two single-lamp ballasts in one housing and therefore the statement that each fluorescent lamp requires a separate ballast is not refuted. There is no saving in size or weight by this procedure but of considerable importance is the correction of low power-factor, the reduction in stroboscopic effect and a small saving in wattage lost in the ballast equipment.

Ballasts are made in various sizes of cross-section to permit their installation in wireways and fixtures.

LAMP HOLDERS—Two lamp holders, sometimes referred to as sockets, are required for each lamp. The small, compact lamp holders designed for restricted locations, as in show-cases and small coves, will accommodate only the 1" diameter lamps and the starter cannot

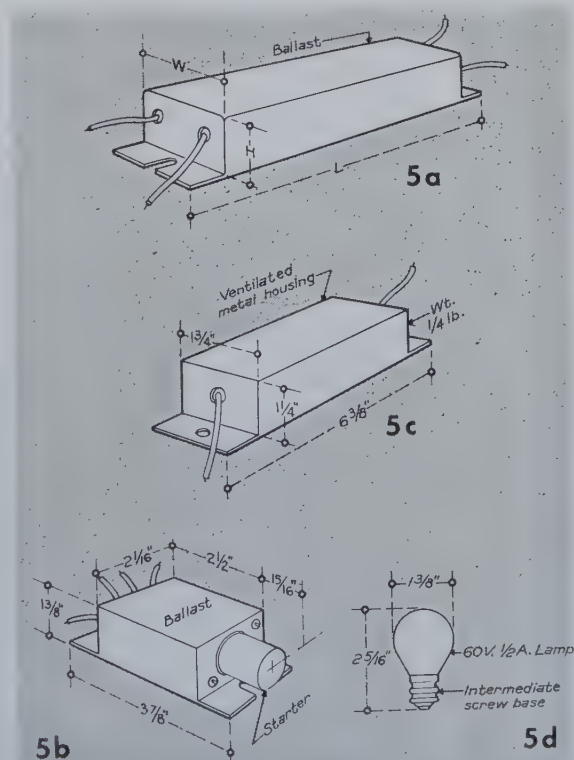
be mounted under one end of the lamp. A lamp holder is available to permit mounting the starter at the end of the lamp or between lamps when they are used end to end. When using these compact lamp holders in a reflector of restricted section, finger holes in the reflector or special ejector type lamp holders must be employed for removing the lamps.

All lamp holders are designed so that the over-all length from the back of one lamp holder to the back of the other is equal to the nominal lamp length of 9", 12", 15", 18", 24", 36", 48" or 60". This spacing must be accurate to insure satisfactory mechanical and electrical connections.

FLUORESCENT TRENDS

Because fluorescent light sources are versatile media for producing architecturally appropriate effects, many installations are specially built to suit the conditions. The question that confronts the designer is how to calculate the number and size of lamps required. It should be obvious from the foregoing discussion that it is not an easy problem to increase or decrease the illumination once the equipment is installed since socket spacing and control equipment must be changed to change the wattage of lamps. Therefore, although the principles of lighting design remain unchanged, it is necessary to be more exact in the illumination calculations. Such accuracy, unfortunately, is acquired only by experience.

Many stock fluorescent lamp suspended fixtures are available for commercial and industrial interiors and when mounted in the usual way the resulting level of illumination may be estimated as being in direct proportion to that obtained from similar type incandescent lamp fixtures when compared on a lumen basis.



BALLAST EQUIPMENT. SEE SCHEDULE FOR DATA

The chart across-page illustrates most of the usual combinations of fluorescent lamps and the ratio to incandescent lamps.

Forty-watt white fluorescent lamps mounted end to end as in a cove are equivalent to, in generated light, 25 watt incandescent lamps on 6" centers, 40 watts on 11" centers, 50 watts on 15" centers or 60 watts on 19" centers. These figures are offered as a guide to the approximate amounts of illumination to be expected from fluorescent versus incandescent lighting when all other conditions are equal. Inasmuch as the other conditions may not be equal nor may it be desirable to create the same illumination, each lighting problem should be given individual attention.

The present trend in the use of lamp colors seems to indicate a preference for the 3500 degree white for stores, offices, and similar commercial interiors, the soft white for restaurants, theaters, meat cases, nightclubs and the daylight for industrial plants, some show-cases and a few stores selling colored merchandise exclusively.

Taking advantage of the tubular form of the fluorescent light sources and their adaptability to higher levels of comfortable illumination there is developing a trend toward the use of continuous fixtures applied to or recessed flush in the ceiling. This method is particularly suited to combinations of fluorescent lighting and suspended acoustical ceilings.

BALLAST SCHEDULE

TWO-LAMP BALLASTS

For 110-120 volts, 60 cycles A.C.

High power factor (95-100%)

Lamps	Approx. size inches	Approx. weight pounds	Approx. watts loss	Circuit diagram
Two 14 watt	See Fig. 5D		17	6a
Two 15 "	1 1/4 x 2 1/4 x 14 1/4	3 1/2	9	6b
Two 20 "	1 1/4 x 2 1/4 x 14 1/4	3 1/2	9	6b
Two 30 "	2 1/2 x 3 1/4 x 9 1/2	7	12 1/2	6c
Two 30 "	1 1/4 x 2 1/4 x 23	7 1/2	18	6c
Two 40 "	2 1/2 x 3 1/4 x 9 1/2	7	15 1/2	6c
Two 40 "	1 1/4 x 2 1/4 x 23	7 1/2	24 1/2	6c
Two 65 "	2 1/2 x 3 1/4 x 14 1/4	10 1/4	24	6b
Two 100 "	2 1/2 x 3 1/4 x 19 1/4	14 1/2	35	6c

SINGLE LAMP BALLASTS

For 110-120 volts, 60 cycles A.C.

High power factor (90% or more)

One 15 watt	1 1/4 x 2 1/4 x 8 3/4	1 1/2	4 1/2	6d
One 20 "	1 1/4 x 2 1/4 x 8 3/4	1 1/2	4 1/2	6d
One 30 "	1 1/4 x 2 1/4 x 14 1/4	3 1/2	11	6e
One 40 "	1 1/4 x 2 1/4 x 14 1/4	3 1/2	11 1/2	6e
One 65 "	2 1/2 x 3 1/4 x 14 1/4	9 1/2	24	6e
One 100 "	2 1/2 x 3 1/4 x 14 1/4	10 1/4	24	6e

SINGLE LAMP BALLASTS

For 110-120 volts, 60 cycles A.C.

Low power factor (50-60%)*

One 6 watt	See Fig. 5B	1	2	6f
One 8 "	1 1/16 x 1 3/4 x 4 1/4	1	2.8	6f
	See Fig. 5B			
One 15 "	1 1/4 x 1 3/4 x 4 1/4	3/4	4 1/2	6f
One 20 "	1 1/4 x 1 3/4 x 4 1/4	3/4	4 1/2	6f
One 30 "	1 1/4 x 2 1/4 x 8 3/4	2 1/4	8	6g
One 40 "	1 1/4 x 2 1/4 x 8 3/4	2 1/4	12	6g
One 65 "	1 1/4 x 2 1/4 x 14 1/4	3 3/4	15	6f

SINGLE LAMP BALLASTS

For 110-120 volts, Direct Current

Lamps	Ballast		Circuit diagram	Resistor			
	Approx. size inches	Approx. weight pounds		110 volts		120 volts	
				Ohms	Watts [▲]	Ohms	Watts [▲]
One 15 watt	1¼ x 1¾ x 7¼	1¼	6h	165	18	198	21
One 20 "	1¼ x 1¾ x 7¼	1¼	6h	112	14	144	17

Ballasts are available for 50 cycle systems and for 199-216 and 220-250 volt circuits

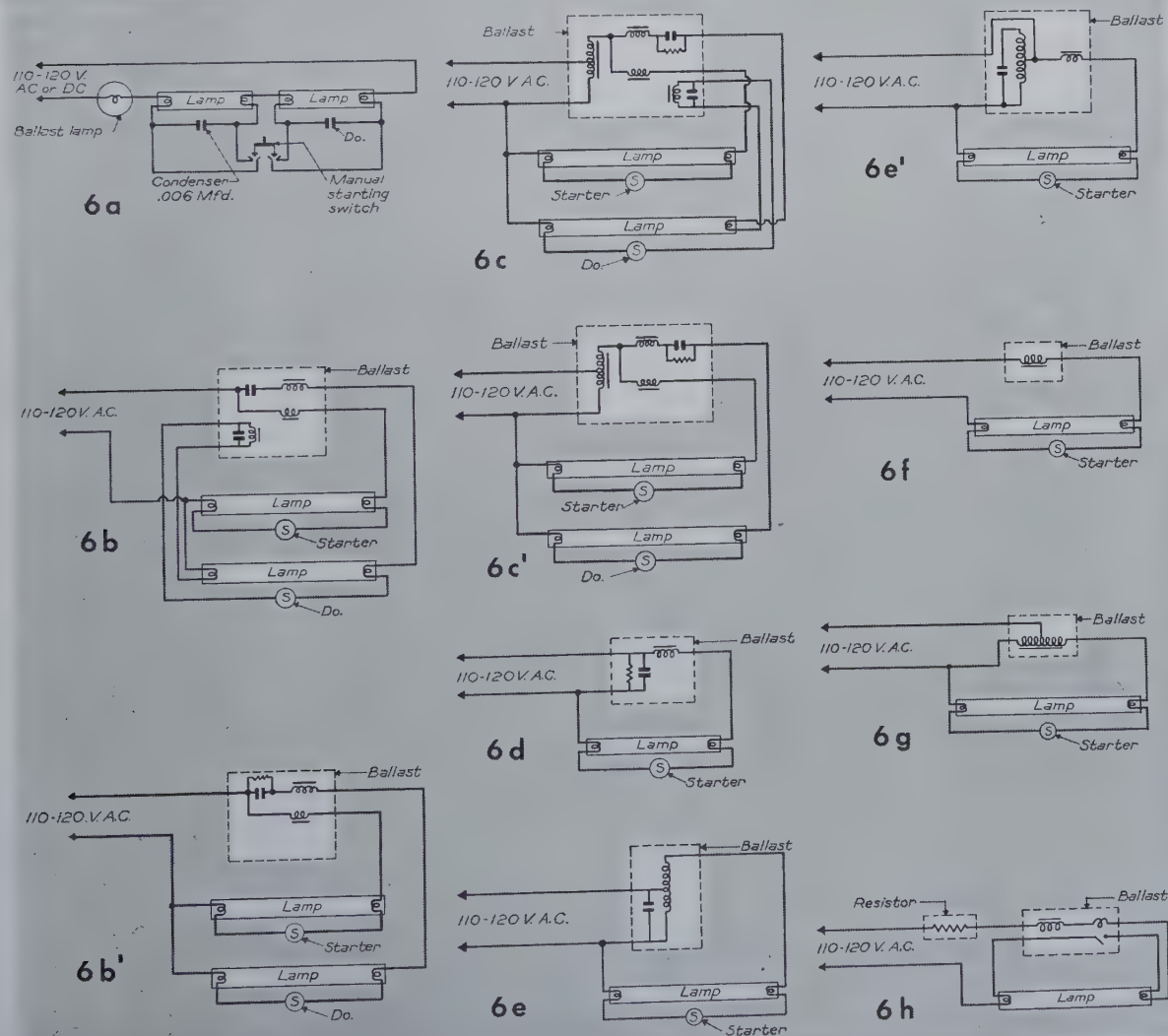
* Capacitors are available for correcting low power factor ballasts.

▲ Includes watts loss in ballast.

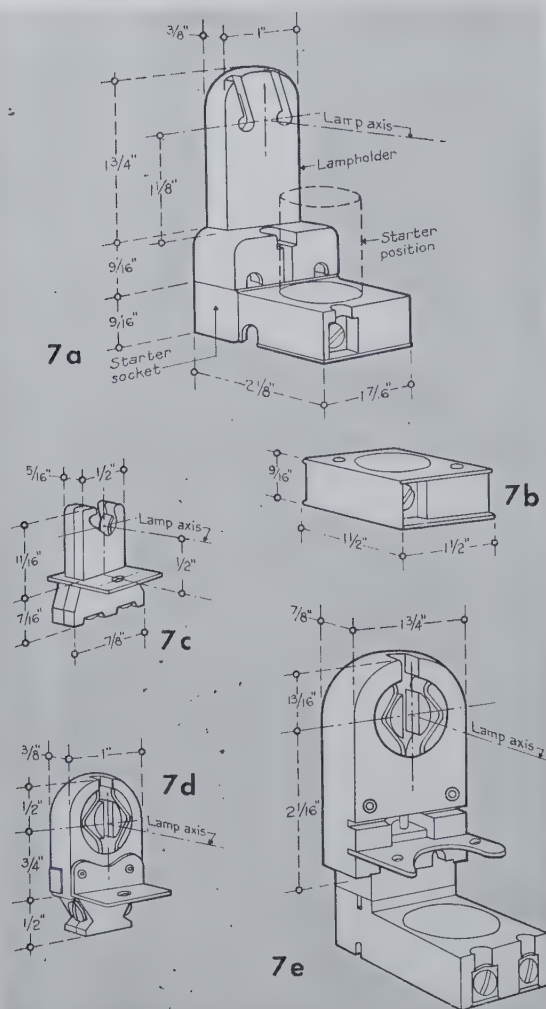
TABLE GIVING RATIO OF $\frac{\text{FLUORESCENT}}{\text{INCANDESCENT}}$ on a Generated Light Basis

White Fluorescent Lamp Wattage	Incandescent Lamp Wattage							
	40	60	75	100	150	200	300	500
1-15	125	71						
1-20	108	82					
2-15	141	106	73				
1-30	173	132	91				
3-15	160	110	67			
2-20	164	112	69			
1-40	131	81			
1-65	131	81			
4-15	146	90			
3-20	169	104	73		
2-30	181	112	78		
4-20	139	97	62	
2-40	162	113	72	
2-65	162	113	72	
1-100	162	113	72	
3-30	167	117	74	
3-40	170	108	63
3-65	170	108	63
2-100	145	84
4-40	145	84
4-65	145	84

Example: This table indicates that 4-20 watt white fluorescent lamp will generate 97% as much light as a single 200 watt incandescent lamp.



CIRCUIT DIAGRAMS FOR VARIOUS COMBINATIONS AND SIZES OF FLUORESCENT LAMPS



TYPICAL ACCESSORIES FOR VARIOUS SIZES OF FLUORESCENT LAMPS: (7A.) LAMPHOLDERS FOR 14, 15, 20, 30, 40 WATT LAMPS (WITH ATTACHED STARTER SOCKET); (7B.) STARTER SOCKET FOR REMOTE LOCATION; (7C.) LAMPHOLDERS FOR 6, 8 WATT LAMPS; (7D.) LAMPHOLDERS FOR 15, 30 WATT LAMPS; (7E.) LAMPHOLDERS FOR 65, 100 WATT LAMPS (WITH ATTACHED STARTER SOCKET).

SPECIAL CONDITIONS

If it happens that lighting is a major factor in a proposed "new and different" design, the architect may, after reading this discussion of the characteristics of fluorescent light sources, be confronted with a seemingly impossible problem brought about by some one of the several limitations of these lamps. In fact, he may be advised by "authorities" that it just can't be done with fluorescent lamps. Such a statement should not be accepted without investigation because there are very few conditions that cannot somehow be solved. A competent lighting consultant, experienced in the theory of fluorescent lamp circuits, one who has an electrical engineering background, can offer the solution to such "impossible" conditions as the complete elimination of stroboscopic effect, operation of all sizes of lamps and fluorescent tubing on direct current, operation on any frequency or voltage, including private farm lighting systems, yachts, trailers, etc., operation on dimmer and in cold weather,

elimination of radio interference, operation of several lamps on a single control, several lamps on a single starter or even no starter, immediate starting without the usual preheating period, perfectly quiet ballast equipment. In fact, almost any condition has a solution. It should not be inferred that these problems can be solved without sacrificing something such as lamp life, efficiency or a moderate initial cost for equipment.

The following suggestions will emphasize in summary style some of the advantages and limitations of the fluorescent light sources:

DON'T connect, even momentarily, a fluorescent lamp with alternating current equipment to a direct current supply—the lamp or ballast will burn out.

Even though a fluorescent lamp is more than twice as efficient as an incandescent lamp, **DON'T** expect the electric bill to be cut in half. Usually, lighting represents only a part of the load connected to the meter, motors, heaters, business machines, refrigerators, radios, oil-burners, elevators, appliances, etc., also being measured for billing by the same meter. Furthermore when the power consumed is decreased substantially the power rate will increase slightly which tends to partially offset a reduction in the billing.

DO provide adequate mounting facilities. Fluorescent lamp fixtures are heavy, weighing as much as 45 pounds for a unit holding four 40 watt lamps.

DO check city ordinances and electrical codes regarding fluorescent lamps and particularly fluorescent tubing.

DO specify high power-factor equipment. Many states and utility companies require it.

DON'T try to concentrate light from fluorescent lamps or tubing as for instance in show window or spot lighting service. Compared to incandescent lamp practice only moderate concentration can be achieved.

DO include the wattage consumed by the control equipment when calculating the connected load.

DO select interior color schemes under the color of fluorescent lamps to be used. Generally, choose warm colors but avoid strong yellow or yellow-green.

DO inspect and let your staff inspect as many examples as possible of fluorescent lighting in colorful interiors.

DON'T use fluorescent lamps which are uncorrected for flicker in areas where rotating or moving mechanisms are an important factor. Experiment first.

DON'T measure the illumination level until the end of 100 hours of operation. A drop of around 10% will occur during this period of stabilization.

DO apply the proper correction factors to the illumination readings when measuring fluorescent lighting.

KEEP posted on the latest developments.

The author wishes to express his appreciation to the General Electric Company, the Westinghouse Lamp Division, the Hygrade Sylvania Company, and the Claude Neon Company for their cooperation in supplying data on their products.

America Preferred

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(Continued from page 12)

continue to live in the District. Why does Congress deliberately flaunt its power in the face of facts and public opinion? Or has somebody put a locomotive in the lobby?

Real estate operators in Virginia, quick to take advantage of any given situation, are promoting from the enlarged point of view. Their perspective does not cover a small community but rather a new city built around this colossus. Furthering their scheme is the fact that the Navy Office Building, on a nearby site, is now nearing completion. And its potential home-buying employees run into the thousands. Local radios blare their wares—6 rooms, a bath and a half, sound construction, and “designed for your comfort and pleasure by *Louis R. Moss*—one of Washington’s better architects in the small house field.” Eureka—an architect’s name mentioned over the radio. But on a commercial—is it ethical or are we still tied down to a professionalism in which the ethics are only as good as the individual?

Walt Fredericks drops around to visit and give out about his boss’ Embassy enlargements. Embassy work is apparently hard to get but *John J. Whelan* seems to have the proper entrée. And speaking of Embassy work brings to mind a story we heard recently. About two years ago work was not too plentiful for private architects here (or elsewhere). One of Washington’s best, *Harry F. Cunningham*, F.A.I.A., was fortunate. He was commissioned to do an Embassy for the then peaceful German government. Apparently sketches were prepared and approved and working drawings started, when the world was shocked by the Nazi-vasion of Poland. Under forced draft goes Harry F. to his contract department, pulls out his remuneration reminder, promptly deposits same in waste-basket and undoes his contract with a letter of no regrets. RED

DEFENSE EXPOSITION

A comprehensive presentation of industrial and commercial activity on the defense program will be staged in the Grand Central Palace, New York, September 20 to October 18, as the Civilian and National Defense Exposition. It is planned to educate the public on the subject of defense through interesting exhibits and graphic demonstrations of its part in the program.

SYRACUSE CONVENTION

Architecture in the national defense program, the influence of post-war conditions on the profession, small house and speculative building, architectural services and legislation will be discussed at the 1941 convention of the New York State Association of Architects which will take place at the Hotel Syracuse, Syracuse, N. Y., October 16 to 18. Feature of the convention will be an exhibit of building materials.

On the final day of the convention there will be a joint luncheon and meeting of delegates and representatives of the Central New York chapter, A.I.A.

President of the state association is *James W. Kideney*, of Buffalo, and Professor *L. C. Dillenback*, of Syracuse, is general chairman of the convention. Members of his committee are *William P. Crane*, *Charles R. Ellis*, *Merton E. Granger*, *Kirk Helm*, *Paul Hueber*, *Melvin L. King*, *Hawley E. McAfee*, and *Thomas L. White*. Mr. White is head of the Syracuse chapter of the state association.

DESIGN SCHOOL

Its fall semester for day and evening sessions will open on September 23, according to an announcement from The School of Design in Chicago, 247 E. Ontario St., Chicago; *L. Moholy-Nagy*, director. The school trains designers and architects by a method whereby workshops and classroom work are integrated.

The problems assigned are chosen to fit the student to meet the challenge of new techniques and material, according to the prospectus. There are two and four year courses for designers; a six year course for architects. Evening sessions are also provided. Courses give essential workshop and classroom subjects covering six major fields.

BAERMANN TO CRANBROOK

The Cranbrook Academy of Art, Bloomfield Hills, Mich., has appointed *Walter Baermann* as head of its new Department of Industrial Design. Mr. Baermann was the founder in 1937, and director until this summer, of the California Graduate School of Design at Pasadena.

A graduate of the University of Munich, Mr. Baermann has been in this country since 1928. His American experience includes work with the design organizations of *Joseph Urban*, *Norman Bel Geddes*, *Henry*

Dreyfuss, *Howe* and *Lescaze*. He has been educational director of the Springfield (Mass.) Museum of Fine Arts, served as consultant to Boston and Worcester (Mass.) art museums. Since 1937 he has been in private practice in Los Angeles and Pasadena.

A.I.S.C. SESSION

The 1941 Convention of the American Institute of Steel Construction has been scheduled October 14-17 at The Greenbrier, White Sulphur Springs, West Virginia. Details of the Convention plans will be announced later by *V. G. Iden*, A.I.S.C. Secretary.

FEDERATION CLASSES

The Federation Technical School, 3 Beekman St., New York, operated jointly by the metropolitan chapters of the Federation of Architects, Engineers, Chemists, and Technicians, announces the opening of its seventh year as a cooperative non-profit, post-graduate school for architects and engineers. Among the regular courses to be given will be the usual review courses in preparation for the State license examinations. A special course on the Building Code is expected to attract unusual interest. Registration begins September 8th.

TEXAS CONVENTION

The second annual convention of the Texas Society of Architects will be held in Dallas, October 2nd to 4th, at the Baker Hotel. Several eminent architects from other states have been invited to address the convention.

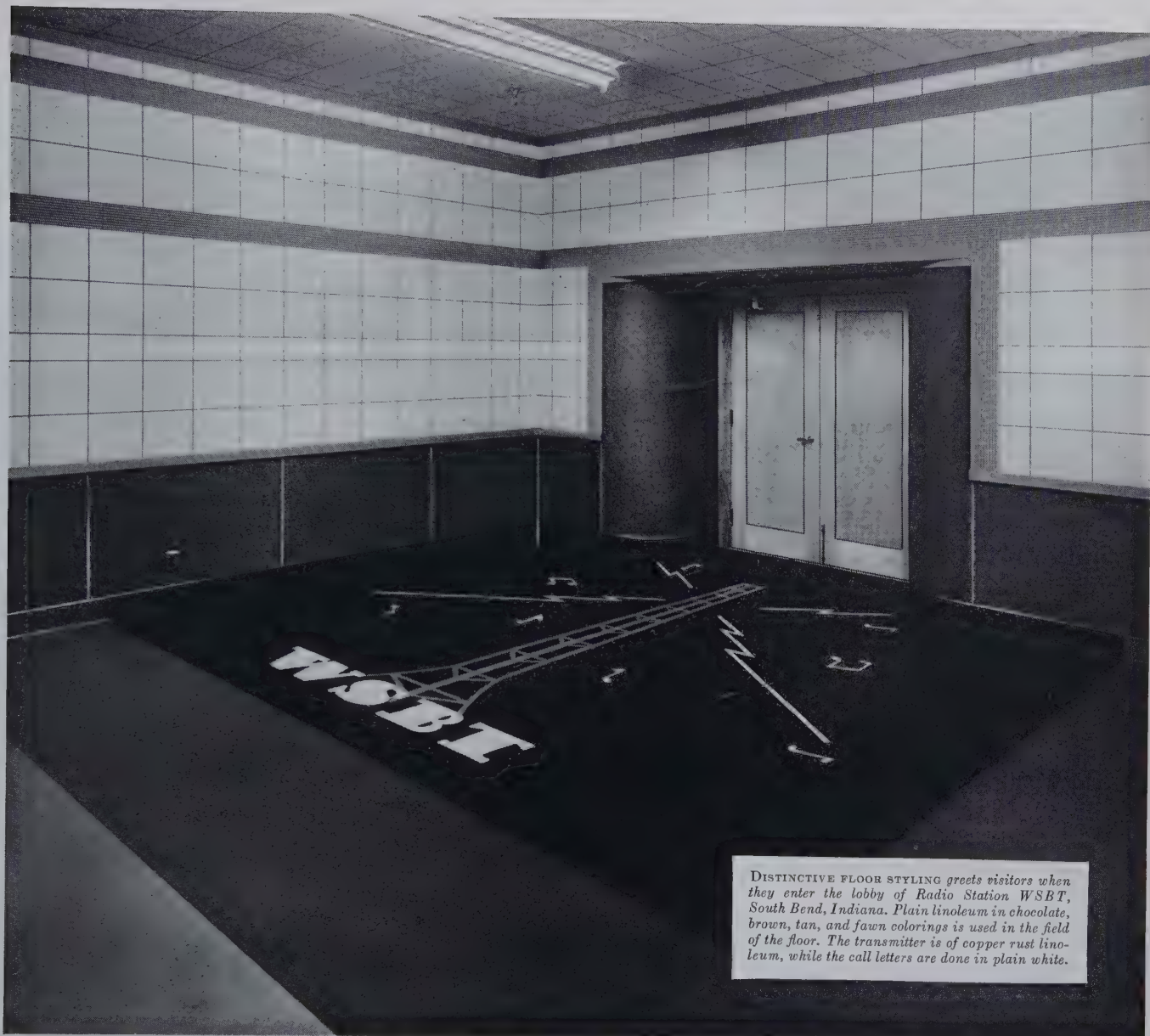
A varied scheme of social entertainment intermingled with interesting business sessions has been arranged. An exhibition of building material products will be held.

INDUSTRIAL SPECIALISTS

The Federal Civil Service examination for Industrial Specialist has been amended to remain open for receipt of applications until further notice, according to a recent announcement from the United States Civil Service Commission, Washington, D. C. The commission points out that the national defense program has need of men with experience in many fields.

Salaries range from \$2,600 to \$5,600 in various grades and no written examination is given. Further details and applications may be had from Civil Service offices at any first- or second-class post office.

(Continued on page 62)



DISTINCTIVE FLOOR STYLING greets visitors when they enter the lobby of Radio Station WSBT, South Bend, Indiana. Plain linoleum in chocolate, brown, tan, and fawn colorings is used in the field of the floor. The transmitter is of copper rust linoleum, while the call letters are done in plain white.

Plan floors that command attention

RADIO stations have an eye for showmanship. They are quick to adopt ideas that command the public's attention. It is not surprising, then, to find so many eye-appealing floors of Armstrong's Linoleum installed in radio stations the country over.

Take, for example, this handsome lobby of Station WSBT. The Armstrong's Linoleum Floor is new, different, yet it's dignified and colorful. The attractive transmitter inset gives pleasing individuality to the whole room. And the combined material and labor costs were considerably less than for any other comparable flooring.

Perhaps you may not be concerned with plans for a radio sta-

tion, but as an architect you can appreciate—for any job—a flooring that offers so much latitude in design. Similarly, your clients will appreciate Armstrong's Linoleum for its many practical advantages. The quiet underfoot which is so essential in a broadcasting studio is an asset anywhere. And this material which draws so much attention to its colorful, wear-defying appearance demands little attention

for maintenance. Routine dusting and occasional washing and waxing keep Armstrong's Linoleum Floors handsome and new-looking for years and years.

Sweet's and the Home Owners' Catalog contain full facts about Armstrong's Linoleum. Or write for information and installation specifications to Armstrong Cork Co., 1213 State St., Lancaster, Pennsylvania.



ARMSTRONG'S FLOORS LINOLEUM

Rubber Tile - Linotile (Oil-Bonded) - Asphalt Tile - Cork Tile - Linowall Wall Covering



Your Client will say... *"Many Thanks!"*

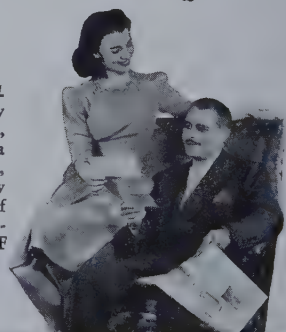
Wouldn't even your hardest-to-please clients appreciate your saving one third of their fuel bills each year in their new homes? Certainly! And you can do it simply by specifying that homes be equipped completely with Window Conditioning—double Libbey-Owens-Ford Glass in windows and exterior doors.

Window Conditioning has been sponsored by Libbey-Owens-Ford for the last four years. This season, the idea has been backed by a national advertising campaign on Glass Designed for Happiness. The advantages of double glass insula-

tion have been put before nearly eight million families. That's 25 per cent of the nation's total—families in a position to build and afford architectural service.

Other glass features promoted in this activity and on which you will find a ready-made client acceptance include built-in mirrors, picture windows, Vitrolite baths and kitchens. Yes, there's a new appreciation of glass today—particularly of Libbey-Owens-Ford Glass Designed for Happiness. Libbey-Owens-Ford Glass Company, Dept. PP-941, Nicholas Building, Toledo, Ohio.

"SAVED \$38 ON FUEL last winter." Many are the statements, like this one of a family in Illinois, to prove definitely the economy of Window Conditioning with L-O-F Quality Glass.



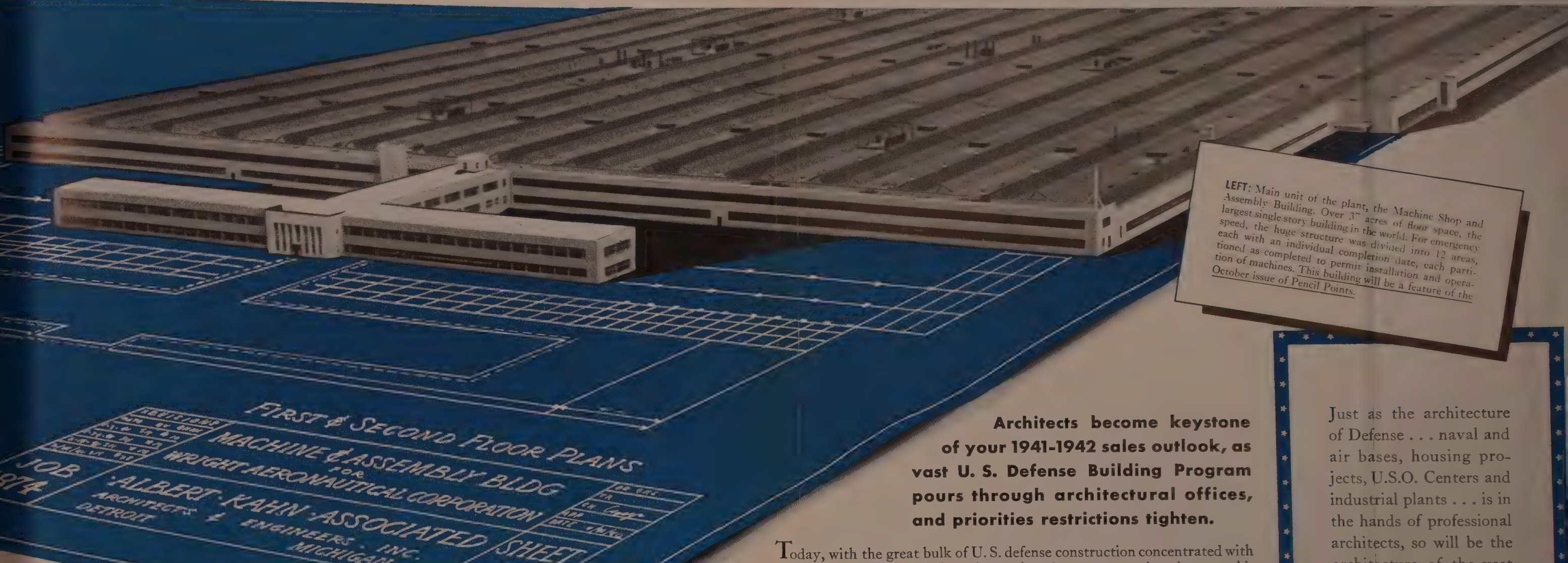
LOF **LIBBEY · OWENS · FORD**
Glass **Designed for Happiness**



ALL TYPES OF WINDOWS can be Window Conditioned without spoiling their beauty. In the large front window of this attractive home, storm window muntins match original window design.

FIRST PICTURES!

The newly completed \$37,000,000 Wright Aeronautical plant at Lockland, Ohio . . . largest aircraft engine plant in the United States . . . in production eight months after ground was broken . . . schedule, 1000 engines per month.



LEFT: Main unit of the plant, the Machine Shop and Assembly Building. Over 37 acres of floor space, the largest single story building in the world. For emergency speed, the huge structure was divided into 12 areas, each with an individual completion date, each partitioned as completed to permit installation and operation of machines. This building will be a feature of the October issue of Pencil Points.

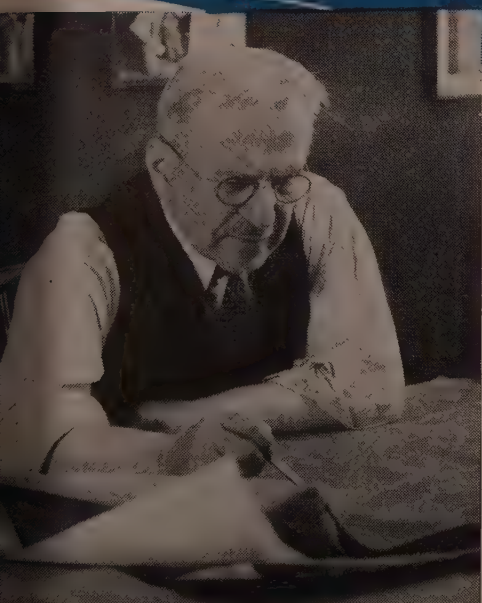
Architects become keystone of your 1941-1942 sales outlook, as vast U. S. Defense Building Program pours through architectural offices, and priorities restrictions tighten.

Today, with the great bulk of U. S. defense construction concentrated with professional architects, it is no longer just *important* to advertise to architects. It is now almost imperative. For unless your product is well thought of by architectural firms, the chance of its being specified for defense construction is slim. And unless it is specified for defense construction you will have increasing difficulty getting materials with which to manufacture.

ANOTHER SIGNIFICANT FACT: The trend in defense and private construction is toward those architectural firms which have a staff of designers and draftsmen sufficient to handle the enormous amount of planning and specification. This means that the magazine in which you advertise—today even more than previously—*must* reach not only the chief architects, but the *complete* specifying power of the architectural firm.

THERE IS ONLY ONE SUCH MAGAZINE... Pencil Points . . . unique in its penetration throughout the architect's office . . . unique in its coverage of 9,611 architects *plus* the 5,135 designers and draftsmen who design buildings with the products of their choice. Pencil Points will sell your product to the *full* specifying power of the architect's office. Pencil Points has the largest professional architectural circulation in the field.

Just as the architecture of Defense . . . naval and air bases, housing projects, U.S.O. Centers and industrial plants . . . is in the hands of professional architects, so will be the architecture of the vast Post-War construction both here and abroad. The importance of the architect in your current and long-range sales program can hardly be overestimated.



ALBERT KAHN, architect of the Wright Aeronautical plant, whose four decades of architectural practice have largely been responsible for the splendid new industrial architecture of America. The office of Albert Kahn, employing a large staff of draftsmen, designers and other architectural specialists, has become a center of efficiency. In



UNIT NO. 2 . . . THE ALUMINUM CYLINDER-HEAD FOUNDRY, 600 yards South of the Main Building, is the largest of its type in the world, and will surpass the combined production of the Company's two foundries in New Jersey. The building was designed to house the most advanced mechanized equipment, and to provide by means of maximum light and complete air conditioning the most ideal working conditions. Production is on a straight-line basis, automatic as ingenuity can make it. Throughout the plant, from the time sand for molds is dumped into hoppers until the finished cylinder heads come off the line, every possible hand

PENCIL POINTS

A Reinhold Publication

THE LARGEST PROFESSIONAL ARCHITECTURAL CIRCULATION IN THE FIELD

How to be sure

a good design produces as good a store front



Architects: Thalheimer & Weitz

WHEN you design a store front, you design it to do a specific job . . . to draw business and boost profits for your client. Yet the best design in the world can result in only a mediocre finished front, unless the design is executed with quality materials.

That's why so many architects standardize on Pittco Store Front Products when it comes to building

the fronts they design. These products are meant to be used together. They have proved their consistently high quality and versatility on thousands of American Main Streets. They can be counted on to produce as unified, harmonious and sales-building a front as you originally projected on paper.

The Pittco line of store front products includes glass of every kind for

store front work. And a quality store front metal that adds the finishing touch to quality glass store fronts.

For store fronts that really work for your clients, carry out your designs with Pittco Products. Send the coupon for our free book of information about them. It contains many graphic illustrations of actual Pittco Store Fronts which have built better business for their owners.

PITTCO STORE FRONTS
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"PITTSBURGH" stands for Quality Glass and Paint

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2329-1 Grant Bldg., Pittsburgh, Pa.

Please send me, without obligation, your new, illustrated booklet, "Pittco Store Fronts — and Their Influence on Retail Sales."

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City _____ State _____



Pride

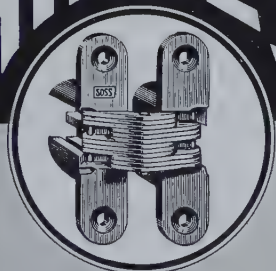
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Is Enhanced by This
ULTRA MODERN DETAIL
THAT PERMITS FLUSH,
UNBROKEN INTERIOR SURFACES

SOSS

INVISIBLE

HINGES



YOUR CLIENT WILL APPRECIATE THIS FEATURE

No longer need surfaces be marred by those unsightly, disconcerting gaps and projections whenever a hinge is necessary. SOSS Invisible Hinges are out of sight when the door is closed. Their absence beautifies doors, cupboards, folding partitions, etc., and widens the opportunity for modern, unusual design. Write for full details.

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

of Interest to Architects, Draftsmen and Specification Writers

Publications mentioned here will be sent free unless otherwise noted, upon request, to readers of PENCIL POINTS by the firm issuing them. When writing for these items please mention PENCIL POINTS.

SAXE WELDED ERECTION SYSTEM—Comprehensive manual and recommended engineering practice on the use of the Saxe erection seat and clip to produce an easily-fabricated and erected job for the assembly of steel frames. The 8½ x 11 spiral-bound book, 42 pp., is replete with detailed drawings of various welded connections assembled with Saxe seats and clips, welded steel specifications, and a guide, "The Welder's Trouble Shooter," published by Westinghouse. J. H. Williams & Co., 400 Vulcan St., Buffalo, N. Y.

ZURN LAVATORY TRAPS—A.I.A. File No. 29-C-4. Folder on bath and lavatory traps. Specifications and construction details included. 6 pp. 8½ x 11. Included also is the Drainindicator, a pipe sizing and specification chart, to aid in calculating size of drainage lines for various types of installations. J. A. Zurn Mfg. Co., Erie, Pa.

G E CONDENSING UNITS—A.I.A. File No. 30-f. Reference manual for architects and engineers covering General Electric Freon-12 condensing units for air conditioning and general refrigeration applications. Included are specifications, dimension and outline drawings, performance and engineering data, etc. 56 pp. 8½ x 11. General Electric Co., Air Conditioning and Commercial Refrigeration Dept., Bloomfield, N. J.

SHOWER CABINETS—A.I.A. File No. 29-H-3. Its Bathe-Rite shower cabinets are presented in a 12 page, 8½ x 11 catalog No. 4141 by Milwaukee Stamping Co., Milwaukee, Wis. Construction and installation details are included.

WATERPROOFING PASTE—A.I.A. File No. 3-B-4 or 7-A-2. By adding zilicon to its waterproofing paste, Truscon Laboratories, Detroit, Mich., has improved its product by adding to it an element that makes it possible to use less water in mixing concrete and still maintain proper workability. This is described in a six page, 8½ x 11 folder.

W. A. RUSSELL & CO. (WAR-CO) MOISTURATOR.—Folder giving detailed description of the construction and operation of a newly-developed automatic humidifier for use on steam, vapor, hot water or warm air heating systems. Engineering data is included. 4 pp. 8½ x 11. W. A. Russell & Co., Bridgeport, Conn.

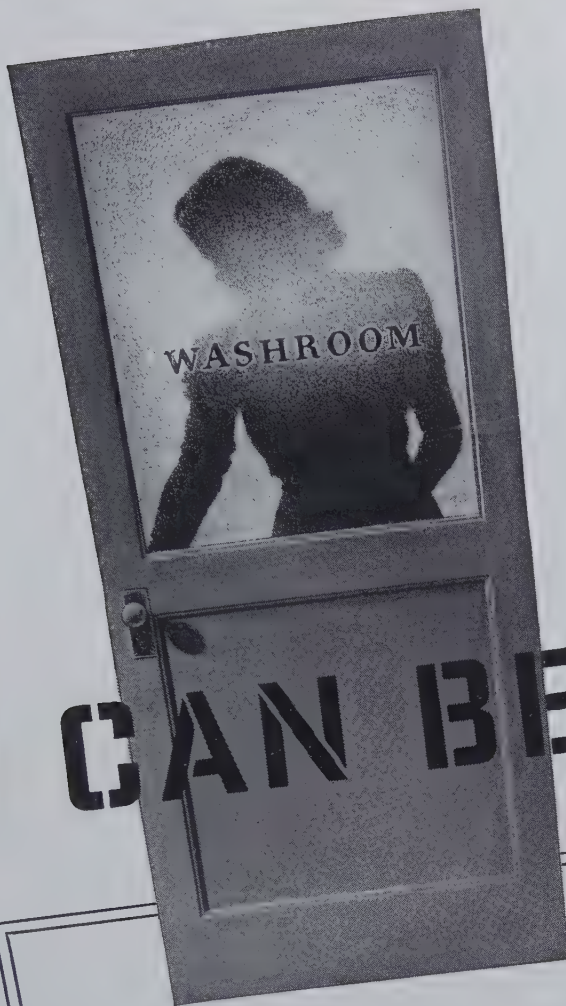
WORTHINGTON - CARBON - DALE EQUIPMENT FOR BUILDINGS AND INSTITUTIONS.—Bulletin WP-1099-B27 describes and illustrates a complete line of air conditioning and refrigerating equipment suitable for a wide range of applications. Construction data, sizes, capacities, etc. 28 pp. 8½ x 11. Worthington Pump & Machinery Corp., Harrison, N. J.

FABRICATION OF ALLEGHENY STAINLESS STEELS.—Publication B109, Rev., 2-6-141, presents general suggestions covering the various fabricating operations for Allegheny Ludlum stainless steels. Brief descriptive data is included on both chromium nickel and straight chromium stainless steels. 28 pp. 8½ x 11. Allegheny Ludlum Steel Corp., Pittsburgh, Pa.

SQUARE D DIGEST.—Digest No. 126, replacing Digest No. 125, dated Sept. 1940. Condensed catalog containing listings and the latest prices of many Square D products, including safety switches, service equipment, multi-breakers and other circuit breakers, panelboards, motor control and pressure switches. 76 pp. 8½ x 11. Square D Co., 6060 Rivard St., Detroit, Mich.

TEN-LOX STAIR TREAD—A 4-page, 8½ x 11 folder from The National Bronze & Aluminum Foundry Co., Cleveland, Ohio, discusses the use of Ten-Lox anti-slip treads and tiles in commercial and industrial buildings wherever safety is a factor. It may be installed on existing surfaces. Ten-Lox is made of long-wearing materials with abrasive grits that penetrate through the entire thickness of the casting.

(Continued on page 52)



YOU CAN BE SURE

that any service voluntarily preferred by three out of four people will please your clients

- In recent building surveys, 75% of washroom users with a preference for toilet tissue gave it to *ScotTissue*. You can use this preference to satisfy your clients, no matter what type building you're planning. In service, *ScotTissue* has the superior softness and strength that make it a favorite with men and women alike. And *ScotTissue* provides an economical service, for it is packaged to be long-lasting. Scott Paper Company, Chester, Pa.

Trade Mark "ScotTissue" Reg. U. S. Pat. Off.
Copr., 1941, Scott Paper Co.

ScotTissue



HILLYARD'S Penetrating Seal #21

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 50)



Seals all wood floors LEAVES NO SURFACE SURPLUS!

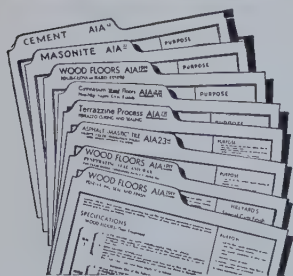
Hillyard's Penetrating Seal #21 is a scientific formula that penetrates deeply into the wood cells, uniting them into a unit that will take severe punishment without showing traffic wear, it is being used with excellent results in classrooms, armories and industrial floors . . . in fact any area subjected to heavy traffic . . . to reduce maintenance costs and protect floors with a minimum amount of labor.



Penetrating Seal #21 is easily applied with sheepskin applicator and becomes an integral part of the floor surface, leaving a smooth, dull finish that can be quickly waxed to a gleaming finish if a bright surface is desired. Better results are obtained when burnished in with the Hillyard "Steeltonian" steel wool machine.



There is a Hillyard Maintenance Engineer in your locality ready to give advice and supervise the application of Hillyard Products to insure you and your clients a traffic resisting floor.



SEND FOR YOURS

SPECIFICATION CARDS
SENT **FREE** . . .
SECTION 17, PAGE 34
IN SWEET'S CATALOG



BUILDERS' HARDWARE—A.I.A. File No. 27-B. This 97-page, 8½ x 11 catalog is divided into three sections, illustrates and describes door closing and door hanging devices and thresholds; casement hardware and transom operators; floor check and overhead door check parts. Oscar C. Rixson Co., 4450 Carroll Ave., Chicago, Ill.

FEDDERS ALL SEASON AIR CONDITIONING COILS.—Bulletin 392. Useful data book for architects and engineers giving complete working data on air conditioning coils for use with refrigerants, cold water, hot water and steam. Dimension drawings, physical data, capacity ratings, information on high capacity thermostatic expansion valves, etc. 46 pp. 8½ x 11. Fedders Mfg. Co., Buffalo, N. Y.

CLOTHES CLOSET FIXTURES—Brochure 541 describes the K-Venience line of such clothes closet fixtures as towel racks, tie racks, hat and coat racks, etc. Knappe & Vogt Mfg. Co., Grand Rapids, Mich.

STEAM CONDUIT BULLETIN—Bulletin No. 381, from H. W. Porter & Co., Newark, N. J., illustrates and describes its Therm-O-Tile underground steam conduit system for permanent protection, support, and insulation of underground pipe lines—hot or cold. 8 pp. 8½ x 11.

SIMPLIFYING LUMBER SPECIFICATIONS.—Folder containing certified lumber standards chart prepared to assist the architect in specifying species and grade correctly for any familiar application. 8½ x 11. The Durable Woods Institute, 155 E. 44th St., New York, N. Y.

FENESTRA HEAVY CASEMENT - TYPE STEEL WINDOWS.—A.I.A. File No. 16-e-1. Useful reference manual for architects covering a line of windows constructed of heavy, steel casement sections for use in all types of fine buildings. Included are specifications, construction features, standard and special hardware data, details, types and sizes, sections, etc. 32 pp. 8½ x 11. Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit, Mich.

(Continued on page 54)

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***SHE'S ONLY FOOLING, MORTIMER!
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Lots of young architects, and old heads too, get around that Penthouse problem with Rotary Elevators! You see you don't need to go to the expense of a Penthouse when you specify Rotary Elevators because with these elevators the load is pushed up not pulled up! Thus, you save not only the cost of the penthouse but also the expense of heavy load bearing columns, counterweights, their rails, etc.

And you needn't worry about Rotary Elevators filling the bill . . . for travel up to 40 feet they're superior in every way . . . That's because Rotary's 16 years of specialization in hydraulic lifting devices has resulted in many engineering refinements such as the Rota-Radial Pump, a smooth starting valve, a special electric lowering valve and other control improvements. You'll get the whole story when you send the coupon for the free Bulletin RE-301.



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Four motors opened brazen throats, four "props" screamed into the morning breeze. The "world's largest bomber" lifted her tons of men and metal and bulleted over the cheers of thousands who stood watching their handiwork. *They* had built her.

Who had built her? She had been built, tried and tested, designed and re-designed—*on paper*—long before the first mechanic touched her. Pencils and Paper, Slide Rules, T-Squares, Angles and Curves, these were the tools that built her. Engineers, designers and draftsmen—these were the men that created her, planned her, made her "building" possible.

To these men, the creators of Industry, whose minds and pencils hold the key to "Building", Frederick Post brings a broad choice of products refined through research and specifically adapted to the quickened tempo of today's designing engineer.

These new Post products—each supplying an unlimited service to the men who plan that others may produce—are worth your serious investigation. By 'phone in more than 50 cities—by mail to The Frederick Post Co., Box 803, Chicago. Send for Bulletin 1000.

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 52)

HARDWARE FOR COMMERCIAL ENTRANCES—A complete line of entrance trim for use on all types of commercial jobs is presented in Catalog K570 from P. & F. Corbin, New Britain, Conn. 36 pp. 8½ x 11. Included is a new line of push bars and door pulls, new thresholds, armored front locks. Many items are kept in stock for immediate delivery.

STOCK MILLWORK ITEMS—A new 8½ x 11, 32 page book, "Open House," contains photographs, sketches, plans, and isometric drawings showing how specific planning problems can be solved by means of stock doors, windows, frames, and other woodwork items of Ponderosa pine. The book is published by Ponderosa Pine Woodwork, an association of Ponderosa pine stock woodwork and lumber manufacturers, 111 W. Washington St., Chicago.

CARPET MANUAL — "Nearly Right Won't Do in Contract Carpets" is a 34-page manual for executives explaining the various carpet weaves most commonly used in contract work, their advantages and disadvantages, their uses and comparative costs. Issued by Alexander Smith & Sons Carpet Co., 295 Fifth Ave., New York, it is 9 x 12 in size, shows typical installations and actual samples of three types of Alexander Smith carpets, with magnified photos of their surface, cross section, and back.

STEELCRETE HANDBOOK — Essential data on standard sizes of Safe-T-Mesh, and drafting room standards showing construction details for partitions, window and door guards, other expanded metal meshes are given in a spiral-bound, 90-page, 8½ x 11 catalog from Consolidated Expanded Metal Companies, Wheeling, W. Va.

FLUORESCENT LIGHTING — Tips on residential fluorescent lighting are given in a new booklet, A-3939. The manual is divided into four parts, gives facts about fluorescent lighting, its advantages, presents a question and answer section, and do's and don'ts of fluorescent lighting in the home. Priced at five cents a copy. Westinghouse Lamp Division, Bloomfield, N. J.

(Continued on page 56)

INSTRUMENTS • EQUIPMENT • BLUE PRINT PAPER • KINDRED SENSITIZED PRODUCTS

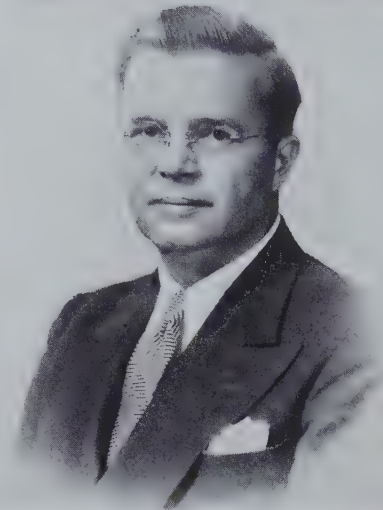


An Engineer's opinion of OIL BURNING SYSTEMS

in relation to defense construction necessities

Oscar Vogelbach, of Newark, New Jersey, is widely known as an engineer of experience and achievement. He has acted as engineer of many outstanding structures, including Mravlag Manor, U.S.H.A. Project at Elizabeth, N. J., Titeflex Metal Hose Co., and many public buildings, in which Petro Burners are installed. He has this to say of the Petro equipment:

"My experience shows that Petro Burners operate with the minimum of repair and are thoroughly reliable in performance, that they eliminate labor cost, and that the Petro organization service leaves nothing to be required, factors which are particularly pertinent in our defense program. Cost reduction has occurred in heating plants where I have used the Petro Oil Burning Systems, whether No. 5 industrial fuel oil is used or the heavier and cheaper pre-heated No. 6 oil. I appreciate the engineering ability which has produced the compact, efficient design of their equipment."

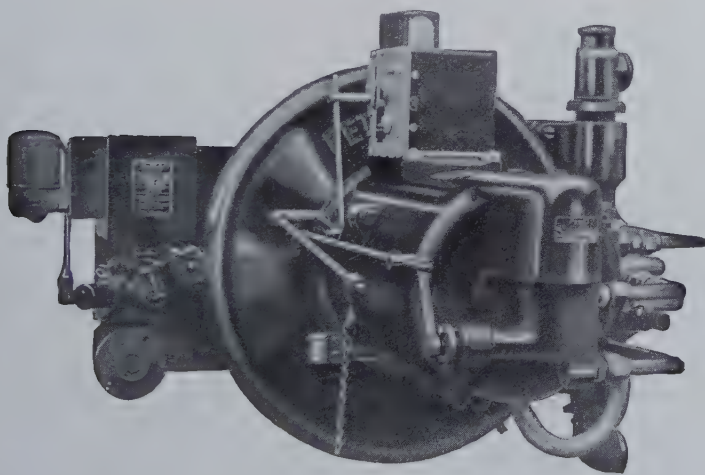


In referring to the defense program, Mr. Vogelbach did not mention the prompt deliveries of Petro equipment, but it appears to be an important consideration.

A large part of Petro's current production of Industrial burners is going into defense construction: Powder mills, armament makers, machine tool manufacturers, and many of the secondary or intermediate producers.

Known performance and dependability are probably primary reasons for these selections of Petro, but the immediate availability of the equipment and engineering service are also vital factors in present conditions.

This prompt delivery is still possible on any orders for Petro and everything possible is being done to continue the quick shipments which have long been recognized as being typical of Petro.



CAPACITIES: to 145 gal. per hr.—487 boiler h.p.—68,000 sq. ft. steam E.D.R.

**FOR FURTHER
INFORMATION**



Petro Industrial Burners for Automatic operation with pre-heated No. 6 oil, or with No. 5 or lighter oils, are available in eight sizes, Models W-2½ to W-9 inclusive. Each burner is a self contained assembly of motor, fan, pump, rotary cup atomizer and interlocked air and oil adjustments.

In the use of preheated No. 6 oil, the Petro Thermal Viscosity System is an integral part of a Petro installation,

insuring reliability of operation and fuel economy.

Semi-Automatic and Manually controlled Model W Burners and "Mechanical" type units are also available to meet circumstances which do not require automatic operation.

To the Architect in domestic building, Petro offers a complete line of burners for use with existing heating plants and complete oil fired boilers and winter air conditioners.

Petro's Engineering Division will gladly answer questions. The Petro Industrial Equipment Catalog will be sent promptly on request.



PETRO
Cuts Steam Costs



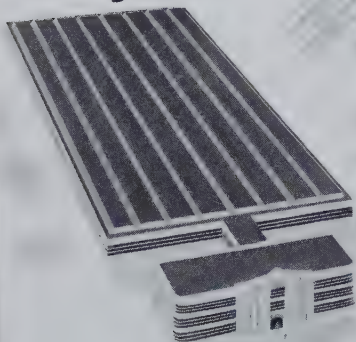
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PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 54)

BUILDING PRODUCTS BULLETIN OF THE PRODUCERS' COUNCIL—Bulletin No. 39, issued by the Producers' Council, Inc., 122 E. 42nd St., New York, from which copies may be secured, contains information on building products and services of the following members:

Bastian-Morley Co. Inc., LaPorte, Ind.—Crane—Basmor gas-fired boilers; the Torpedo Tank gas water heater; the Royal Booster self-contained water heater.

Burnham Boiler Corp., Irvington, N. Y.—Cabinet type Radiant radiator.

Carrier Corp., Syracuse, N. Y.—50M, self-contained Weathermaker, a water-cooled air conditioning unit for general air conditioning applications; Type 51D2 Weathermaker room model, a portable unit for large homes, apartments, offices, and small stores.

Crane Co., 836 S. Michigan Ave., Chicago, Ill.—The All-American sink for continuous counter installations; Series 14 boiler for small homes.

General Electric Co., Schenectady, N. Y.—Announcing a new dust-proof all-metal enclosure for its AE-1A and AE-1B air circuit breakers.

International Nickel Co. Inc., 67 Wall St., New York—Presenting applications of the new No. 35 monel metal for all types of installations.

National Adequate Wiring Bureau, 155 E. 44th St., New York—Bulletin on "How To Safeguard Investment with Adequate Wiring Standards." *National Fireproofing Corp., Pittsburgh, Pa.*—Construction details and technical data on the Natco structural clay tile floor systems for use in commercial and industrial buildings.

National Mineral Wool Association, 1270 Sixth Ave., New York—Bulletin from the Bureau of Mines, U. S. Department of Interior, advocating home insulation as conservation and defense measure. *The Okonite Co., Wilkes-Barre, Pa.*—Technical data on Hazakrome type SN small diameter building wire, Underwriter approved.

Otis Elevator Co., 260 Eleventh Ave., New York—Signal control replaces car-switch control in new and existing installations.

Pecora Paint Co. Inc., 318 Venango St., Philadelphia—Suggested uses of Pecomastic, a pointing compound,

for use with structural glass, acoustical tile.

Pullman Mfg. Corp., Rochester, N. Y.—Presenting the Pullman unit sash balance, a mechanical device for counter-balancing double-hung windows.

Richmond Screw Anchor Co. 816 Liberty Ave., Brooklyn, N. Y.—Description and illustrations of the simplicity and flexibility of its Ty-screw clamping device.

The Stanley Works, New Britain, Conn.—A full line of Dillon jam-proof sash pulleys for various uses and installations.

Tremco Mfg. Co., Cleveland, Ohio—Discussion of the many causes which affect glazing failures.

METAL MOLDINGS—A.I.A. File No. 23-i. A 16 page 8½ x 11 catalog from I. Beck & Sons, Inc., 353 E. 20th St., New York, gives specifications and construction details of its new Alumin-Edge for exterior and interior mouldings available in a variety of shapes to fit various thicknesses of surface materials.

FLEXICORE ROOF AND FLOOR SLABS—An 8 page catalog, 8½ x 11, describing its Flexicore reinforced concrete floor and roof slabs, reinforced with Prestressed steel reinforcements, is available from Price Bros. Co., 1932 E. Monument Ave., Dayton, Ohio.

WINDOW IDEAS FOR SMALL HOUSES—Currently available are the third and fourth in a series of four portfolios showing the application of steel casement windows to various types of homes. Five plates in an 8½ x 11 folder. Detroit Steel Products Co., 2280 E. Grand Blvd., Detroit, Mich.

CENTRAL PAINTS ON THE JOB—A.I.A. File No. 25. This 6 x 9 booklet is pasted on an 8½ x 11 card for convenience in filing, tells what may be used on a particular type of surface, and how to use it. The 45-page book has much pertinent information and data on painting and its applications. Central Paint & Varnish Works, 63 Prospect St., Brooklyn, N. Y.

KITCHEN CABINET UNITS—A series of six 8½ x 11 folders on the Calumet and Cabranette kitchen cabinet units was issued recently by Dwyer Products Corp., Michigan City, Ind. Calumet units come in various sizes to fit all kitchen needs. The Cabranette unit is a self-contained one, contains a built-in refrigerator unit, sink, electric burner unit, other conveniences.

(Continued on page 60)

There's really something **DIFFERENT** *about this kitchen's walls*



THESE walls are distinctive in color and design. They are long-lasting. And they are inexpensive to duplicate in the houses you build . . . because they are faced with Linowall, the linoleum-like wall covering that costs about half as much as other permanent materials.

If you want to put extra value into your houses—at a big saving—you really can do things with Linowall.

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31 Patterns

Linowall can be streamlined around inside and outside corners—another feature that makes for easy cleaning. Its 31 handsome patterns—wood burls, marble effects, and solid tones—simplify your job of working out color schemes. At slight additional cost, it can be inset with designs in metal, glass, wood, plas-

LEAN BUDGETS AND LINOWALL are old friends. At about half the cost of other permanent wall facings, Linowall brings beauty, ease of cleaning, and low upkeep to kitchens like this. Here, the No. 732 Dove Gray Linowall on the walls and door is accented with heavy gauge Linostrips of Armstrong's Plain Linoleum—No. 27 Black, No. 33 Chartreuse, No. 34 Cerulean Blue, and No. 41 Orange. The floor is Armstrong's No. 0466 Inlaid Linoleum.

tics, or linoleum. For example, in the kitchen shown here, the vertical strips are linoleum.

You will find color plates, additional data, and specifications for Linowall in the 1941 edition of *Sweet's Architectural File*. Or

write now for a file-sized, color-illustrated copy of *Decorative Walls of Enduring Beauty*. Armstrong Cork Company, Floor Division, 1232 State Street, Lancaster, Pennsylvania.



ARMSTRONG'S LINOWALL

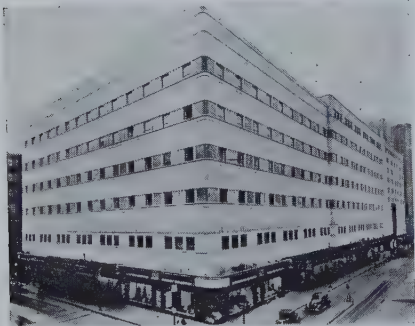
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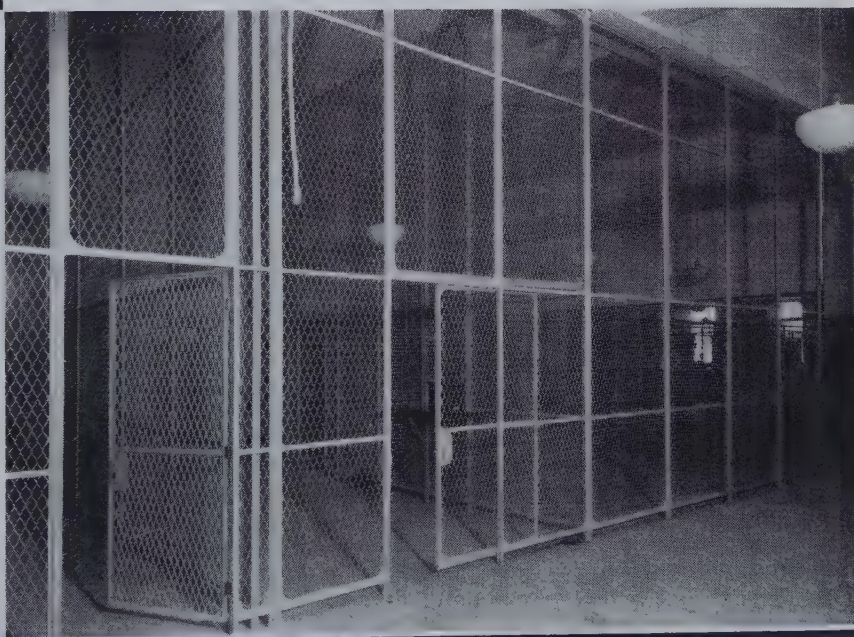
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Enclosures made of Steelcrete Expanded Metal can be quickly erected and easily altered should plans change later. The open mesh of Steelcrete makes for better ventilation and better light distribution. This strong, fire-safe fabric is ideal for use in partitions, locker-rooms, storage rooms and tool-room enclosures as shown at the right. All necessary accessories, including hinges, frames and vertical supports are available.



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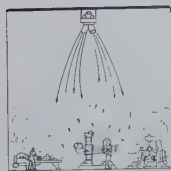
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UNIT HEATERS
VENTILATING FANS • EXHAUSTERS • BLOWERS • TURBINES

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 56)

BATHROOM CABINETS—Morton Mfg. Co., 5105 W. Lake St., Chicago, Ill., has available a display kit which helps the architect visualize how Morton bathroom cabinets will look in the bathroom. Included in the kit are: an illustration of a bathroom wall, with accessories in scale, and three sets of picture cards showing the various cabinet models in the firm's line. To visualize how the cabinet will look, simply place the picture card on the wall illustration. Each picture card has on the reverse side such information as model number, mirror size, wall opening.

WOOD FINISHES—An illustrated 8½ x 11 folder from Franklin Research Co., 5134 Lancaster Ave., Philadelphia, discusses the Chekit method of treating floors, and types of floors to be treated. Chekit is a wood finishing product for preserving, waxing all types of floors.

CORRUGATED WIRE GLASS—A.I.A. File No. 12-J. Seventeen pages of construction details of corrugated wire glass for skylights, saw-tooth, and side wall construction, are contained in a 20-page catalog, 8½ x 11, from Pennsylvania Wire Glass Co., 1612 Market St., Philadelphia.

ODOR ABSORBERS—The Dorex Division of W. B. Connor Engineering Corp., 114 E. 32nd St., New York, has issued a six page, 8½ x 11 circular on its unit odor absorbers. Featured are illustrations, together with construction and operation details. Equipment ranges from small types for home and office use to larger types for hotels, hospitals, industrial applications.

PORCELAIN ENAMELING—Illustrations of store fronts, service stations, theatres, and restaurant buildings using porcelain enamel for architectural purposes, are given in an 8½ x 11, 24-page loose leaf catalog from Davidson Enamel Products, Inc., Lima, Ohio. Specifications and structural details are also listed.

MAY OIL BURNER—Dramatically illustrated is the patented Gero-tor Pump in a new 4-page, 8½ x 11 folder from May Oil Burner Corp., Baltimore, Md., on its Model NSJ oil burner. The pump delivers a constantly-controlled oil flow to the atomizing nozzle, is said never to wear out. A page of the folder is devoted to the firm's patented fuel-saving devices.

DOUBLE CAPACITY with the new IMPERIAL "Floatless" SUMP PUMP

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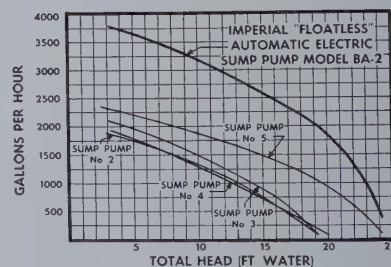
—and you get this added capacity at no extra cost to your clients

● The new high capacity Imperial "Floatless" Sump Pump actually handles twice the volume ordinarily handled by sump pumps of similar horsepower and price.

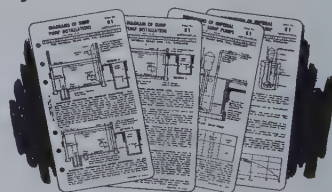
This greatly increased pumping capacity gives you two very important advantages: (1) It enables you to double your safety factor on ordinary installations. (2) It enables you to specify a low cost pump in many cases where a higher priced one formerly was necessary to provide sufficient capacity.

Along with these advantages you also get all the superior features of Imperial pumps, including "floatless" automatic electric control and brass-bronze construction.

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Woltz & Willard, architects; C. M. Davis, engineer and contractor, all of Ft. Worth, Texas.

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BEAUX-ARTS COURSES

The Beaux-Arts Institute of Design, 304 E. 44th St., New York, recently announced its program for the coming season. The Department of Sculpture, under the directorship of *Gaetano Cecere*, will begin classes on September 29th. Morning sessions in life and antique modeling will be open to both men and women students; evening sessions to men only. Monthly competitions will be conducted.

At the invitation of the Director, distinguished sculptors will give instruction and criticism. On the Committee on Sculpture are *Gaetano Cecere*, Director and Chairman; *Edward McCartan*, *Paulanship*, *Alfred Geiffert, Jr.*, *Joseph H. Freedlander*, *William Van Alen*.

The Department of Mural Decoration, under the direction of *Edward Laning*, mural painter, will offer four competitive problems for solution.

Otto Teegen, Architect, who continues as Director of the Department of Architecture, has obtained programs for a series of competitive problems from architects in twelve different states from Massachusetts to California. Because of the scope of interest, as evidenced by the wide range of architects cooperating, the training prepares a student for many types of problems.

CARROLL GREENOUGH

Carroll Greenough, known for his work in France during a long residence there, died in Asheville, N. C., on August 18th. He studied at the Ecole des Beaux Arts in Paris and practiced there for more than twenty years. During the World War he designed many hospitals in France, was later associated with *Whitney Warren*, architect of the restored Louvain Library. As the final architect of the new American Church of Paris, his work supplemented that of *Ralph Adams Cram*. Since 1934 Mr. Greenough had worked on various projects of the United States housing program.

INDUSTRIAL ARCHITECTURE

There will be offered in the coming year a five year course in Industrial Architecture, and an option in Industrial Architectural Design in the last year of the regular five year course in the Department of Architecture, University of Pennsylvania, Philadelphia, Pa.

J. Roy Carroll, Jr., Assistant Pro-

fessor of Design, and executive chairman of the design staff, has been appointed to coordinate the academic with technical phases of the course.

COLOR AND THE WOMAN

Some of the glamour of the fashion world has been drawn upon by the United States Gypsum Co., 300 W. Adams St., Chicago, to bring a new, personal color approach for its Texolite paint before the woman who buys. The firm, in dramatizing its paint, advises women to paint walls with colors that compliment her. To help them do this, the company is providing a color ruler.

The ruler is a pocket-size card which shows all the colors of the spectrum as they shade to near black or near white. Crossed off are the color areas to be avoided; left open are those areas best suited for the type indicated. And there are five types—blond, brunet, redhead, silver-gray, and the All-American or brown-haired type. With the Texolite Color-Type-Guide, it is possible to tell at a glance which is the proper tint or shade for the women in the house.

Just as the living habits of the family act as a guide to the architect in planning the house, so the firm feels that a woman's coloring should be a guide to the paint colors which the architect specifies for the house.

Texolite paint is odorless, dries in a few minutes after application. Subtle or bold, deep or pastel color effects are made possible by the use of a colorless binder.

"Considerable criticism is being directed by the architectural profession at some of the governmental departments for the method employed in obtaining architectural services in connection with the defense program. While in most cases, architects and contractors are selected simultaneously, considerable work is being given to contractors who are asked to furnish the plans as well as do the construction work. It is the latter method which is objected to by the architectural profession.

"While most of the problems are of the industrial type for which often the engineer serves rather than the architect, experience has shown that even in the simplest and most straightforward problem a capable architect will easily prove his worth."

Albert Kahn, F.A.I.A.
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An Architect Looks At A Roof

Here's an architect looking at a roof. It's a roof on a building that he designed. His reputation is tied up in that building . . . every part of it . . . and he wants *the roof to last*.

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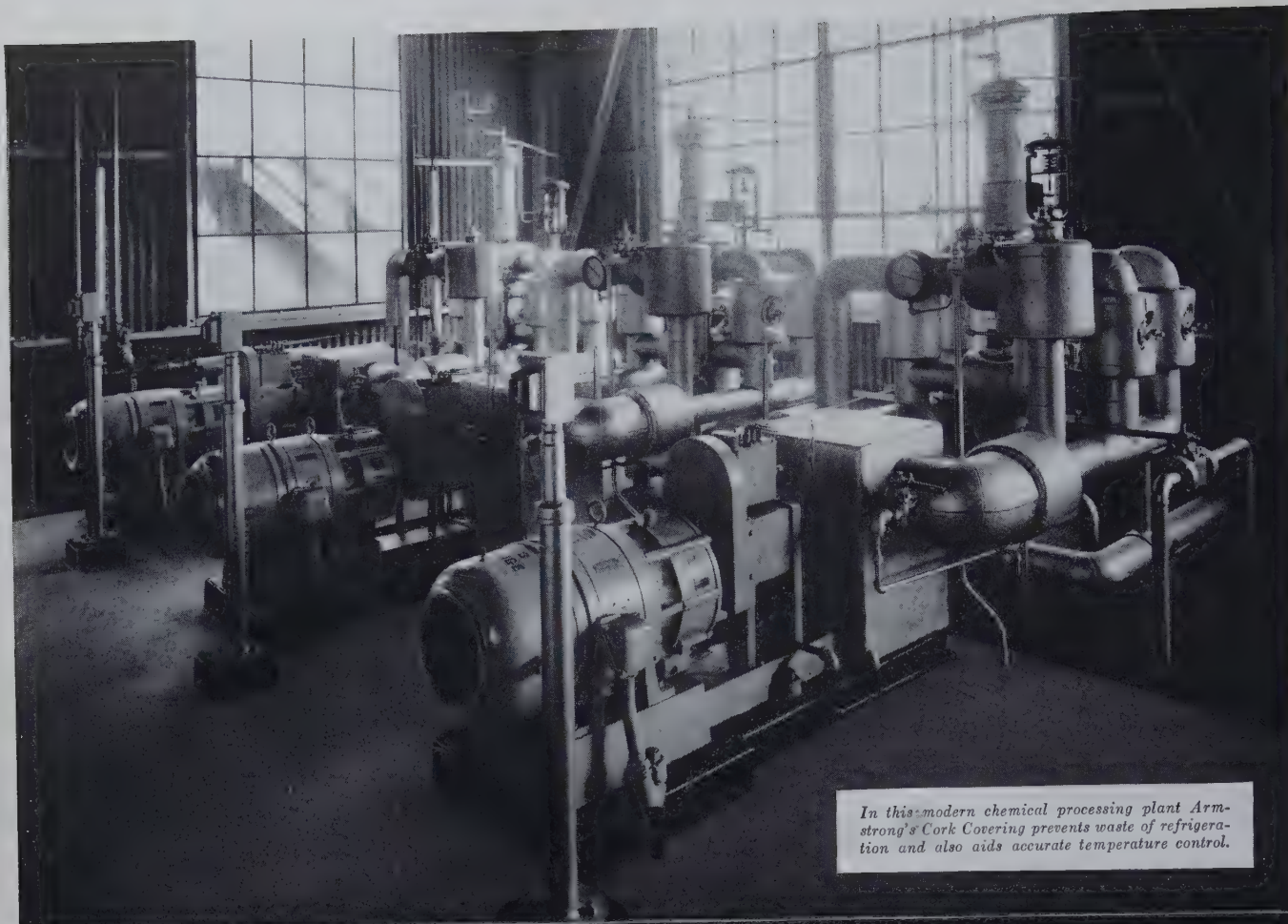
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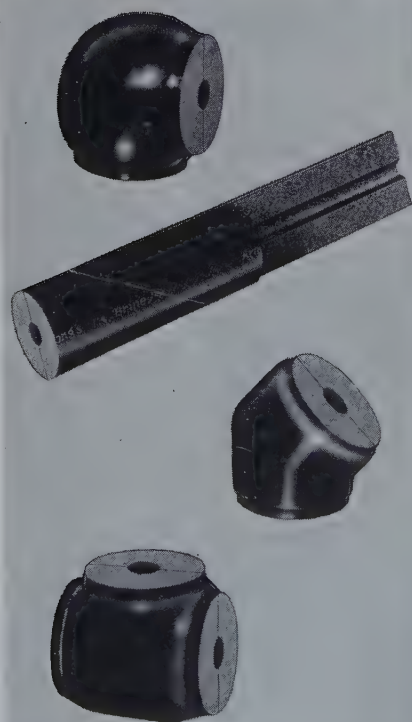
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Armstrong's Cork Covering is made in sizes which accurately fit all standard pipes and fittings from 1/4" up. For straight pipe runs it is furnished in sections 36" long. Covers for all types of fittings are machined for a close fit and provide the same dependable protection

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Practically all cork covering is used in plants engaged directly or indirectly in defense work and in plants which require refrigeration to protect perishable foodstuffs. Because of this fact and because the moderate needs for this insulation have not interfered with the government program of building up a reserve supply of cork, we are able at the present time to fill all orders. For information get in touch with the nearest Armstrong office or distributor or write to Armstrong Cork Company, 922 Concord St., Lancaster, Pennsylvania.



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WILLIAM M. KENDALL

That scholarly architect whose buildings combined an elegance of proportion with a great mass, *William Mitchell Kendall*, senior member of the firm of *McKim, Mead & White*, New York, died on August 8th. Born in 1856 at Jamaica Plain, Mass., he inherited his aptitude for the classics from his father, an educator of note, and his mother, a well-known astronomer. He was graduated from Harvard in 1876; then studied architecture at the Institute of Technology, Boston, for two years. After a year and a half's study in France and Italy, he entered the office of *McKim, Mead & White, Architects*, as a draftsman in October, 1882.

He was largely responsible, during this period, for the architectural details of such buildings as Madison Square Garden, Morgan Library, Washington Arch. In 1906 he became a member of the firm, designed such buildings as the New York Post Office, American Academy in Rome, McKinley Memorial in Niles, Ohio; Academy of Arts and Letters, New York; Arlington Memorial Bridge, Harvard School of Business, Ira Allen Memorial Chapel at the University of Vermont, and the Olin Memorial Library at Wesleyan University, Middletown, Conn. A great number of these designs were won in competition.

At the time of his death, Mr. Kendall was a member of the National Academy of Arts and Letters; Fellow of the American Institute of Architects; Trustee and Vice-

President of the American Academy in Rome; and Associate Member of the National Academy of Design.

An editorial in the August 11th issue of the *New York Herald Tribune* eulogized this noted architect whose death "broke a link with a great tradition."

"AFTER DEFENSE, WHAT?"

Under this title the National Resources Planning Board, Washington, recently issued a booklet discussing post-defense planning. Pointing out that "full employment is the key to national prosperity as well as individual welfare, and that the individual can produce little working alone," the introduction to the pamphlet stresses the "organization for maximum production on the basis of full employment. Doing the job pays the bill. The central problem is not money, it is manpower, resources, and organization. Finance was made for man, and not man for finance."

The Board has been instructed by the President to collect and analyze all constructive plans for significant public and private action in the post-defense period insofar as these have to do with the natural and human resources of the nation. Lines of action to be explored and developed include plans for demobilization, for public works and activities, plans with industry, expansion of service activities including the development of hospitals, schools, and community facilities for recreation, culture, and art, plans for security, for financing, and plans in the international scheme.

NATIONAL GALLERY

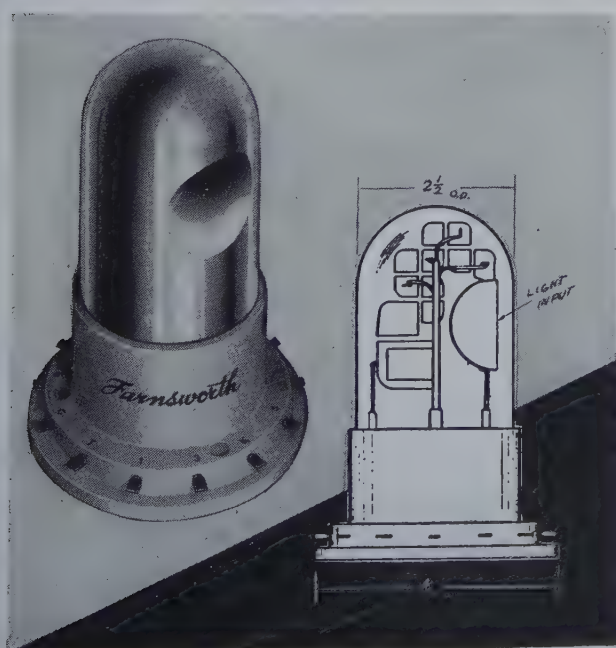
The architectural credit for our presentation last month of the National Gallery of Art in Washington was intended to reflect the circumstances of the design of the \$15,000,000 building—although we were aware that it is more customary to refer to the architects as *John Russell Pope, Architect; Eggers & Higgins, Associate Architects*. At the time the late Albert Mellon announced his \$8,000,000 (*sic.*) gift to the nation the drawing of the National Gallery design by John Russell Pope reproduced last month on page 497 was published in *LIFE* (February 15, 1937). Obviously the design was comprehensively developed as the project was carried forward, subsequent to the decease of Mr. Pope, and it is to Eggers & Higgins and the members of their organization that credit should go for the completed building. Landscaping of the plot was designed and executed under the supervision of *Alfred Geiffert*.

PUBLIC WORK RESERVE

Objective of the recently-created Public Work Reserve is to encourage state and local governments to prepare future long-range programs of public work so that the nation may have well-coordinated and planned projects, prepared to meet any urgent need for expanded public services and facilities, as a factor in providing additional employment at a time of emergency.

"The project has been established to prepare an inventory and

(Continued on page 66)



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HIGGINS



(Continued from page 65)
develop a reservoir of all needed and useful public work," points out E. C. Smith, Jr., national director. "It is our intention to secure and maintain a nation-wide listing of all potential public work, with developed plans and cost estimates, reviewed and revised from year to year, to permit prompt prosecution of the work when and if funds for financing the work have been provided, either from local or Federal sources."

At a recent three-day meeting in New York, Jacob Baker, Coordina-

tor of Public Work Reserve, said it would be necessary to compensate for the \$30,000,000,000 armament program in order to keep the nation's productivity total next year at \$110,000,000,000. He believed the country would spend \$10,000,000,000 yearly on its armed forces. Private industry would be able to make good \$10,000,000,000 of the assumed deficit, leaving \$10,000,000,000 to be taken up by public works. (In a single year, 1937, the sum devoted to public works in the United States was, he said, \$8,500,000,000.)

CLASSICAL REVIVAL IN NEW YORK CITY

The Museum of the City of New York recently concluded an exhibition of so-called Classic Revival Architecture featuring the XIX Century in New York, which parallels that of the Gothic Revival held there a year ago. These two stylistic currents,—the Classic and the Medieval,—dominated the Revivalist Movement in XIX Century American Architecture as, indeed, they also did in European Architecture.

The New York of about 1800, it must be remembered, seems *not* to have been the provincial mirror of contemporary English life which Boston, Philadelphia, Baltimore, or Charleston were, but rather, a more cosmopolitan little port, having a bustling and extremely heterogeneous population. Its recent *emigrés* from the French Revolution mingled with earlier Huguenot, British, and Dutch Settlers, so that the social tone remained more receptive to a constant stream of new-comers than in the other ports. Then, too, the opening of the Erie "Canawl" in 1825, and the Harlem Railroad a decade later, put New York in touch with a wider hinterland, and by way of becoming the commercial if not the intellectual hub of our universe!

During the first quarter of the XIX Century, our Classic Revival builders took their cue from Roman models, using architectural handbooks illustrating them as guides. Such architects as John McComb, Jr., Josiah Brady, and Martin Thompson erected pleasing structures, using a modicum of Roman orders and Adamesque detail, culminating stylistically in the Merchants' Exchange on Wall and William Streets by Thompson and Brady in 1827.

But the professional activity here in New York of some competent French Architects and Engineers, since the 1780's, had given a strong Gallic flavor to some of the City's principal buildings. Major L'Enfant had remodeled the Federal Hall on Wall and Nassau Streets in 1789, just prior to Washington's inauguration there as first President, and added both the Roman Ionic portico and the Rococo chancel to St. Paul's Church on Broadway. A highly-gifted architect and his brothers, as yet "dark horses," named Mangin had collaborated with McComb, Jr. upon designing the City Hall, from 1804-12, making it a most impres-

(Continued on page 68)

STOPS DRAFTS AND LEAKS—CUTS FUEL BILLS



IN BOYS TOWN

Illustrated is a recent Dormitory of the Father Flanagan "Boys Town", for which Leo Daley, Omaha, Neb. was the architect, and The Parsons Construction Co., also of Omaha, the General Contractors. Pecora Calking Compound was applied by Bissell Weatherproofing Co. of Kearney, Neb., to permanently seal building joints against moisture, dust and drafts. Present day specifications provide for

adequate weather protection by calking all exposed joints. No better material can be used for this purpose than PECORA. Its record of performance since its introduction 33 years ago has been such as to warrant the fullest confidence of architects and builders everywhere. Pecora Calking Compound will not dry out, crack or chip when properly applied, and it will form a lasting bond between all building materials, similar or dissimilar.

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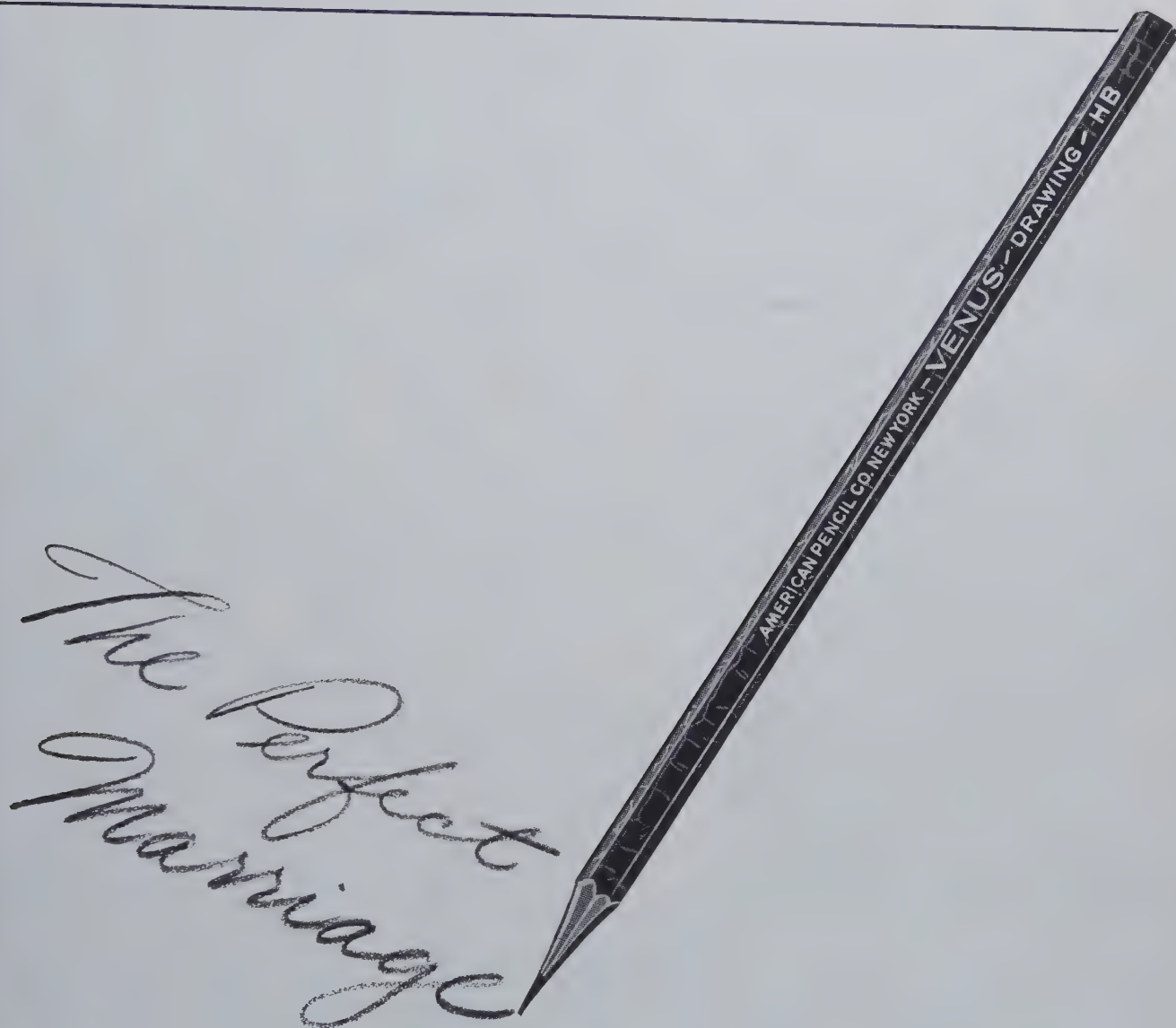
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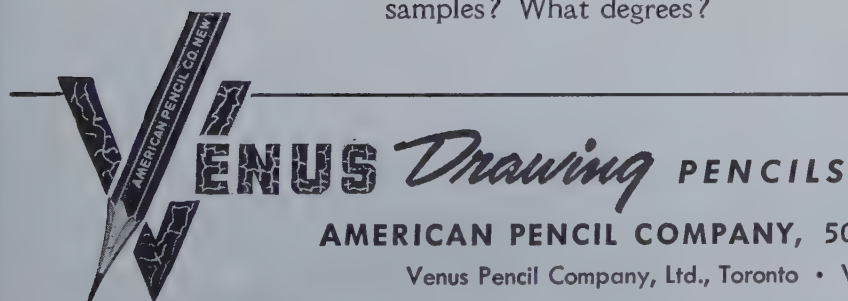
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(Continued from page 66)

sive example of Louis XVI Classicism.

By 1825, and for considerably more than the second quarter of the Century, the Classical Revival took on a Grecian aspect which would leave an indelible stamp not only upon the architecture of New York City, but also upon that of the nation as well, particularly in regard to public buildings. As might be expected, the new stylistic current was led by new blood. A remarkable group of architectural purists centered about the firm of

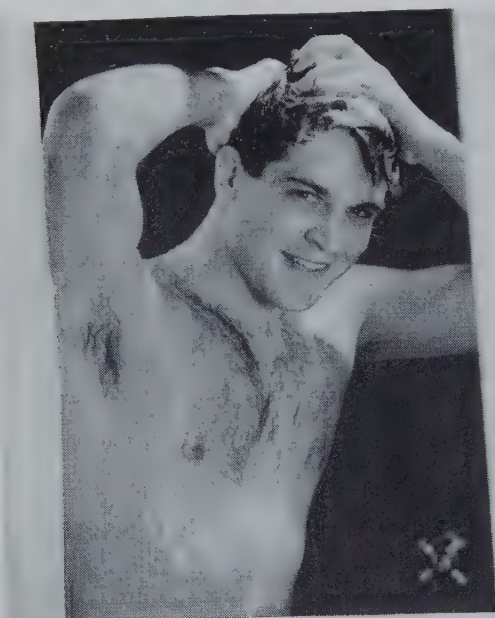
Town & Davis, founded in 1829, and Ithiel Town's already influential Library housed in the office.

Herein, lay the source of the justly-famous Greek Revival in New York: that new combination of intellectual curiosity seeking literary fortification, and a budding American way of life, based upon fervid Democracy, surging Romanticism, Continental expansion, and political optimism. All previous American styles of building had been reflections of European counterparts, but this approach to architecture was based for the first time and primarily upon the recog-

nition by Americans of the American Way of Life with all its needs, and peculiarities, and differences. This is the significant factor of the Greek Revival. This marks the departure of provincial traditionalism and heralds the arrival of native ways. It is not the stylistic mannerisms of the Greek Revival which affect American Architecture so deeply as it is this recognition and definition of purely American phenomena at a time when we were about to embark upon tremendous expansion in every direction.

It was the principal concern of this Greek Revival School of Architects, centering about New York, that they should evolve a truly native type of structure to house truly native ways. That they chose Grecian temples as models has less significance than what they tried to do in order to accommodate satisfactorily our new demands of a Domestic, Civic, Commercial, Educational, and Ecclesiastical variety. Here is a new conception of light, of air, of comfort, of space, of utility which arises directly from the dictates of a new social, political, and economic order. Gone are the feeble imitations of aristocratic palaces and here at hand are the direct if brutal marts of trade, the halls of republican legislature, the stark places of individual worship, and the classless abodes of an industrial society. Modern America is here in embryo, less complex perhaps, but utterly recognizable!

ROGER HALE NEWTON

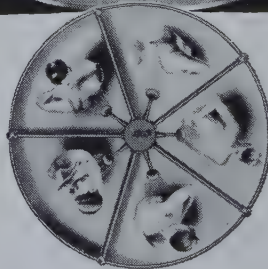
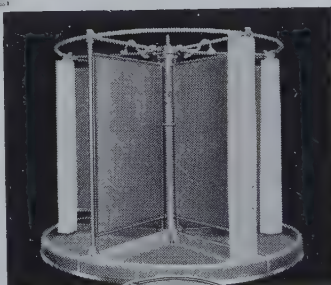


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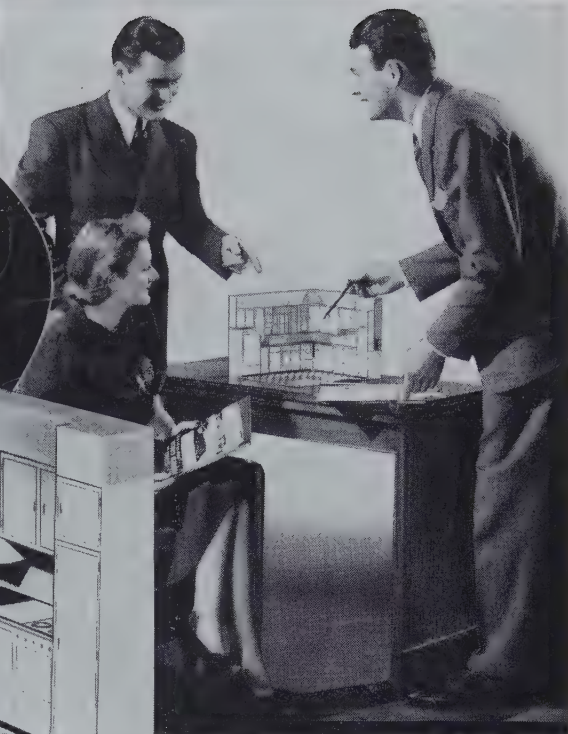
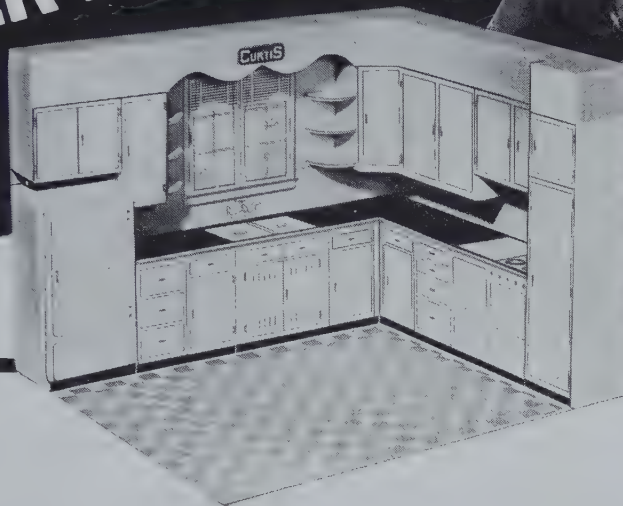
MRS. WILLIAM H. BRAINERD, 10 Upland Road, Wellesley, Mass., wife of William H. Brainerd, Architect, who died recently, wishes to dispose of her husband's file of PENCIL POINTS to anyone willing to pay the sending charges.

CHARLES KREIMER, 522 Channing St., Cincinnati, Ohio, has almost all copies of PENCIL POINTS from 1923 to 1940. His son, Eugene, who worked with Garber & Woodward, Cincinnati, died recently, and the elder Kreimer wishes to dispose of the copies. Please state price.

WALTER R. SHINER, Architect, 1115 Cortez St., Coral Gables, Fla. wants copies of the following: *Architectural Record* — January, 1938, to February, 1941; *American Architect* — January to May 1930; February, 1931; February, April, June, August, 1934. Please state price.

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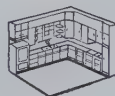


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COLE AND MADSEN, *Architects*, 30 Bay St., Staten Island, N. Y. (Data for complete A.I.A. file, and data for residential work, for drafting room; also samples.)

ALBUQUERQUE INDIAN SCHOOL, *Construction Department*, Albuquerque, N. M. (Catalogs on building materials and equipment items.)

MILLWORK CENTER, INC., *Millwork Contractors*, 118 N. Third Ave., Mount Vernon, N. Y. (A.I.A. catalogs on fireplaces, veneers, Mengel board, metal lath.)

SHOW WIN-DO DISPLAY, INC., *Display and Exhibit Designers*, 27 Sheriff St., New York. (General data.)

KEITH HINCHCLIFF, *Extension Architect*, Extension Service, State College, Miss. (Complete data, especially on material for farm structures.)

MICHAEL KANE, *Draftsman*, 2880 Washington Blvd., Cleveland Heights, Ohio. (Data for complete A.I.A. file.)

THADDEUS M. GALISZEWSKI, *Chief Draftsman*, 1314 Carson St., S. S., Pittsburgh, Pa. (General data, and complete A.I.A. data.)

W. P. GLOBIS, *Draftsman*, 10020 Aberdeen St., Chicago, Ill. (Data for complete A.I.A. file.)

EDWARD HESS, *Designer and Specification Writer*, 1260 Winne-mac Ave., Chicago, Ill. (Samples, and data for complete A.I.A. file.)

WILLIAM T. LEONARD, *Draftsman*, 112 Park St., Statesville, N. C. (Data and samples, and data for complete A.I.A. file.)

WILLIAM F. APPLETON, *Draftsman*, Elm Hill Road, Nashville, Tenn. (Data to replaced burned A.I.A. file.)

THE COTSWOLD STUDIO, *Architectural Designers*, Oxford, N. J. (Data covering special and standard equipment and material used in construction and equipment of buildings devoted to the use and manufacture of fast-burning and explosive products for national defense.)

HENTON BUILDING CO., *Designers and Builders*, 790 E. 260th St., Euclid, Ohio. (Data on residential buildings for A.I.A. file.)

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CHARLES GRABLE, *Designer*, 110 Walnut Place, Syracuse, N. Y. (Data and samples for A.I.A. file.)

L. C. EVANS, *Architect*, 2218 Avenue "C," Washington Hotel, Galveston, Tex. (Material for complete A.I.A. file.)

EDGAR V. ULLRICH, *Architect*, 7608 Girard St., La Jolla, Calif. (Data for complete A.I.A. file.)

FREDERICK L. FRYER, *Architect*, 3903 Livingston St., N.W., Washington, D. C. (Data for complete A.I.A. file.)

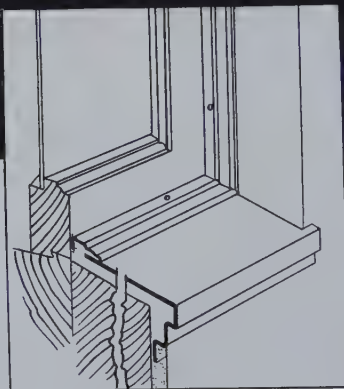
MARSHALL SHAFFER, *Architect*, Architectural Section, United States Public Health Service, 25th and "E" Sts. N. W., South Bldg., Washington, D. C. (Data for drafting room use and for complete A.I.A. file.)

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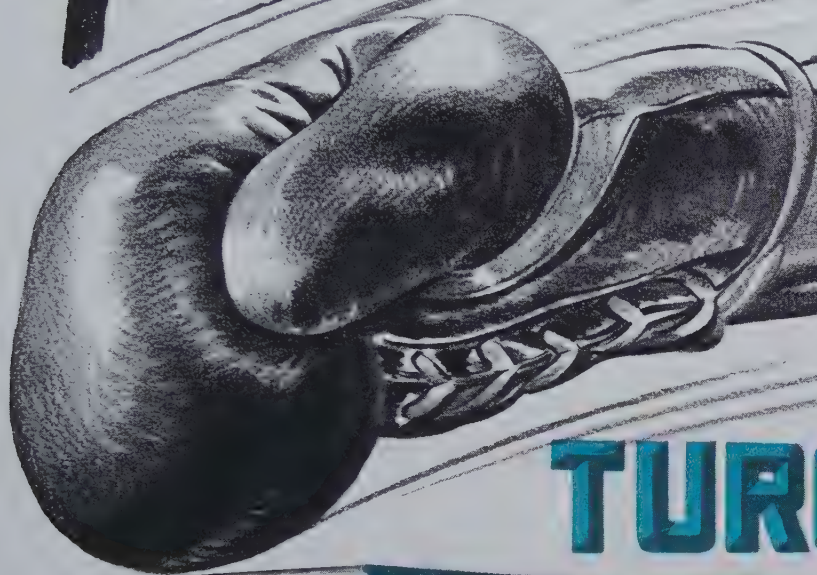
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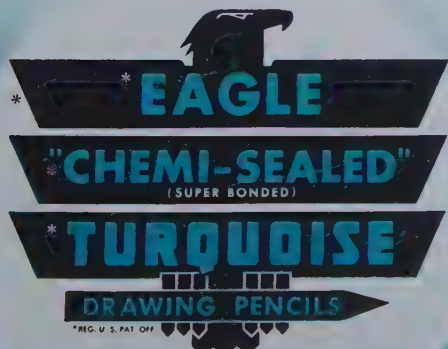


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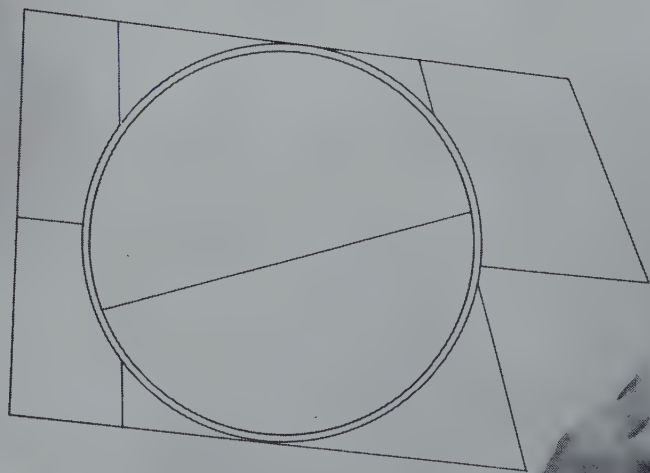
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PERSONALS

L. C. EVANS, *Architect*, is opening a new office at 2218 Avenue "C," Washington Hotel, Galveston, Tex.

JOHN MELZA SITTON, *New York Artist and Educator*, has been appointed Assistant Professor of Fine Arts at Cornell University, Ithaca, N. Y., beginning next fall. He will have charge of classes specializing in creative

research in Medieval and Renaissance techniques, will also hold classes in elementary drawing and painting where design and function will be stressed in the visual arts.

FRANK J. SINDELAR, *Architect*, has opened an office for the practice of architecture at 512 Blount Building, Pensacola, Fla.

EDGAR V. ULLRICH, *Architect*, and EDGAR V. ULLRICH, JR., have opened an office for the practice of architecture at 7608 Girard St., La Jolla, Calif.

W. CHESTER BROWNE, *Architect*, Yale '41, has opened offices for the practice of architecture at 120 Milk Street, Boston, Massachusetts.

COMPETITION ANNOUNCEMENTS AND RESULTS

ESSAY WINNERS

Prizewinners and finalists cited for mention in the Fine Arts Competition conducted by *The Atlantic Monthly* magazine have been announced as follows: First Prize of \$1000, given by the trustees of the Waid Educational Fund of the A.I.A., to John A. Kouwenhoven, of Dorset, Vermont, for his essay, "Arts in America."

The Second Prize of \$500, also furnished by the Waid Fund, went to George Boas, of Johns Hopkins University, for his essay, "Art in Education." Mr. Boas' essay and the essay of Miss Mildred Whitcomb, of Chicago, which received Honorable Mention, will appear in later issues of the magazine.

BRUNNER SCHOLARSHIPS

The Architectural League of New York, 115 E. 40th St., New York, in pursuance of the terms of the Will of Emma Beatrice Brunner, has created the Arnold W. Brunner Scholarships. Approximately \$1,800 is available now for one or more scholarships, and all members in all classes of membership in the League in good standing on October 15 are eligible for these awards.

Awards are to be made for the purpose of "promoting and encouraging accomplishment in the arts and professions represented in the membership of The Architectural League of New York and to render such arts and professions of greater use to the community." It is hoped that the subjects proposed will be in the nature of original and creative work rather than merely in historical or archaeological research, and that they constitute a mature contribution to the chosen field.

Applications should be made to the Committee by means of written submission of a detailed account of the subject to be studied or undertaken, supported by evidence. (Continued on page 76)

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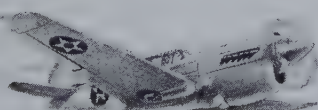
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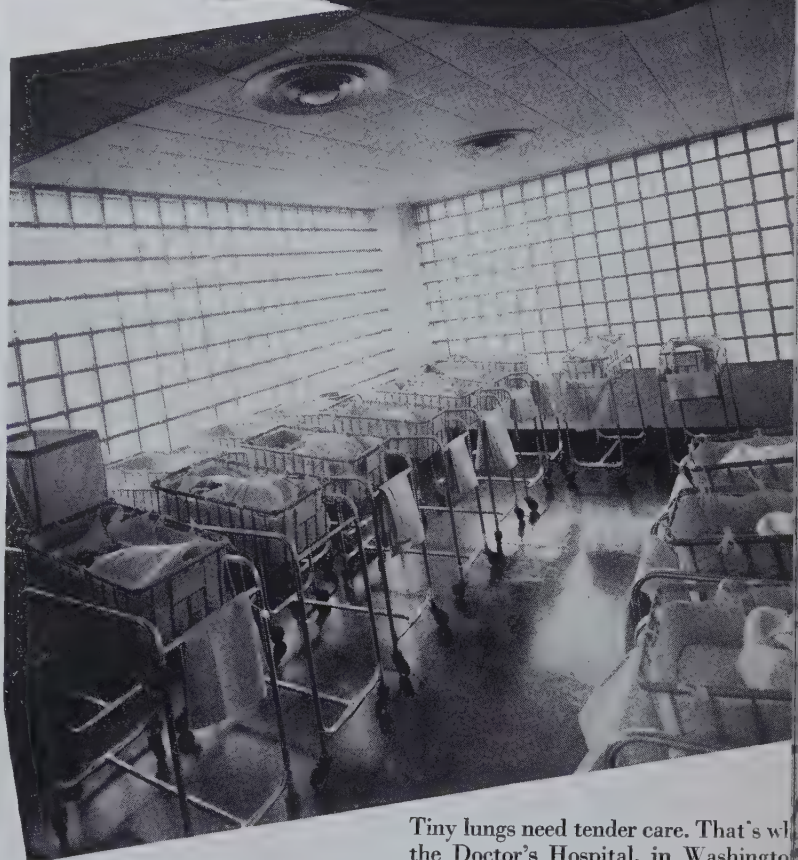
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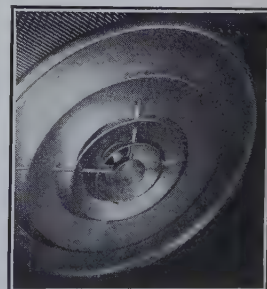
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(Continued from page 74)

dence of its value, and of the candidate's qualifications to undertake the study or work. Announcement of the award or awards, if warranted, will be made about the third week in November. Application blanks will be sent on request.

The League's Committee on Scholarships and Other Funds is made up of: *Arthur Loomis Harmon*, chairman; *A. F. Brinckerhoff*, *Margaret French Cresson*, *Dean Cornwell*, *Henry F. Bultitude*, *Har-*

old W. Rambusch, and the following *ex officio* members: *Frederick J. Woodbridge*, *Frederick G. Frost*, *Jr.*, *Fletcher Collins*.

JEFFERSON MEMORIAL

The Thomas Jefferson Memorial Commission will meet sometime during the month of September, at which time the three models now in the competition for the selection of a statue of Thomas Jefferson, to be placed in the Thomas Jefferson Memorial, Washington, D. C., will be viewed.

AT LARGE IN THE LIBRARY

THIS REALM, THIS ENGLAND, edited by *Samuel Chamberlain* (\$3.75, 179 pages of illustration, 7" x 9"—*Hastings House*, 67 West 44th St., N. Y.)

MARTHA'S VINEYARD, a camera impression by *Samuel Chamberlain* (\$1.25, 73 pages of narrative titled illustrations, 6" x 7½"—*Hastings House*, 67 West 44th St., N. Y.)

THE COAST OF MAINE, *A Photographic Panorama* by *Samuel Chamberlain* (\$2.00, 101 Pages of illustration, foreword by the author, 6" x 7½"—*Hastings House*, 67 West 44th St., N. Y.)

GREAT RIVER OF THE MOUNTAINS: THE HUDSON—*Photographs and prose* by *Croswell Bowen*, Foreword by *Carl Carmer* (\$3.75, 96 pages, 9½" x 12½"—*Hastings House*, 67 West 44th St., N. Y.)

Hastings House has contributed four pleasant books to this restless world. *Samuel Chamberlain*, with carefully selected material, is responsible for "This Realm, This England," "Martha's Vineyard" and "The Coast of Maine"; *Croswell Bowen* for "Great River of the Mountains, The Hudson." These four books of fine pictures will stir your yen for travel or serve to recall pleasant journeys already accomplished.

"This Realm, This England" is a fine contemporary presentation in etching, drypoint, sketch, and photograph of all that is England. Our chief regret is that each reproduction could not have a full page, for the artists represented are truly masters of their media. *James McBey's* "Mersea; Sunset" and *Henry Rushbury's* "The Debtor's Prison—York" are but two that suffer from lack of space. *Joseph Pennell* contributes a delightfully impressionistic study of "Park Lane" and a coarse pencil sketch of Newquay that are notable. Among *Sir Murhead Bone's* many etchings are "The Mystery Ship," "Ready for Sea," and "Piccadilly Circus Night" introducing the section on London. The photographers, unfortunately, are not credited for their fine contributions, which really round out this record of England, "the citadel of a valiant" (Continued on page 78)

Skylights THAT INSULATE, TOO!



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The sectional sketch above shows how "Thermag" semi-vacuum blocks with "Magnalite" diffusing design are used in skylights such as the one illustrated.

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dow glass; (4) temperatures created by heating and air-conditioning are more easily maintained; (5) the chance of condensation underneath is virtually ruled out; and (6) the blocks, with their reinforced concrete grid, present a soffit quite in harmony with modern ideas of design.

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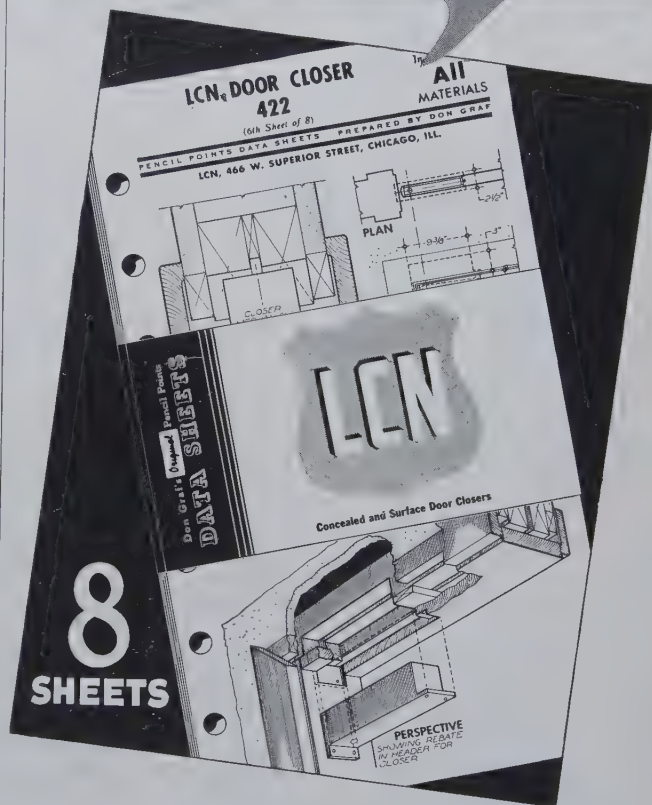
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Now, for the first time, you can get a set of Don Graf Data Sheets on the subject of modern door control. These are just published and ready for distribution. Eight sheets, covering general facts on doors and control requirements plus diagrams and data on the correct detailing and preparation for six principal types of LCN overhead concealed door closers. A set of these sheets will be sent you promptly on request. No obligation whatever. A letter, postcard or the coupon below will bring them.

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LCN, 472 W. Superior St., Chicago

Please send me the set of Don Graf Data Sheets announced in Pencil Points.

Individual

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City State

(Continued from page 76)
 race." The division of the material into sections devoted to the cities, the villages, the countryside, the seacoast, the castles and the churches is commendable. Donald Moffat in a meaningful introduction keynotes the book with: "Here is the England her people are fighting to preserve, as they are fighting to defend their lives."

Mr. Chamberlain has caught the restful charm of the long and firmly established society which has made Martha's Vineyard its home. His photographs, whether of the

rolling countryside, the majestic cliffs that are Gay Head or of the quiet towns, present the Vineyard as an ideally restful retreat. There is the sparkling cleanness of sea air unsullied by the smoke of industry. There is the suggestion of neighborliness, of pleasant "Good Mornings" over picket fences, of quiet Sundays as the inhabitants chat before the gleaming white churches of their forefathers. The frame houses, furnished, no doubt, with the treasure of many successful voyages, have the staid elegance of the prosperous Yankee. There

is the ever-present sea and sail, while inland—though less mellow with age—that same quality we find in the English Countryside.

Many visits to the coast of Maine have afforded Mr. Chamberlain the opportunity to record its essence with his camera. From Kittery to Quoddy he has seen the rugged coastline, the skiffs and shacks of simple fishermen, the schooners and mansions of roving captains. Here too are examples of the "Continuous Architecture" of rambling farm buildings, of white painted homes shadowed by ancient elms and maples. Here are tree-shaded vistas; the campus at Bowdoin, the street in Eastport and several others. Here is the vacationers Maine. We look forward to the publication of the remaining volumes in this series of "American Landmarks" by Mr. Chamberlain.

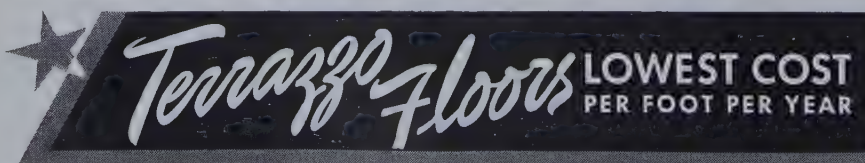
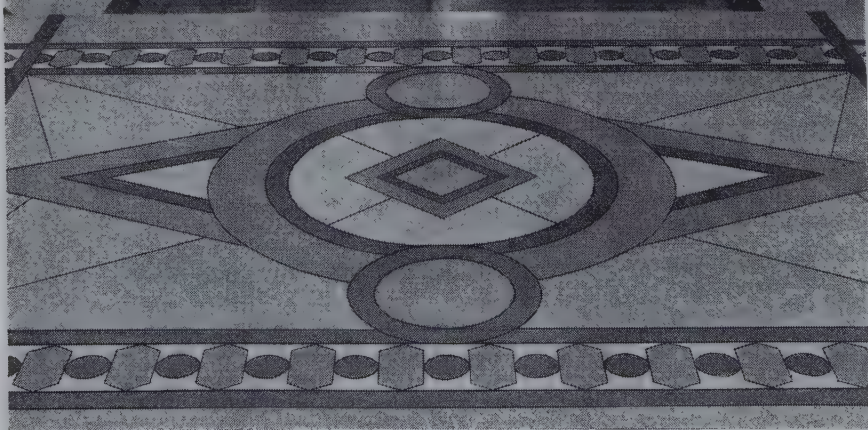
Our own Hudson River has long been famed as one of the really majestic rivers of the world. We who have traveled its banks will appreciate these splendid photographs which trace the river from its source in the Adirondacks to Lower New York Bay. The familiar scenes are well-recorded but the real interest of the book lies in Mr. Bowen's fruitful search for evidences of bygone days. The whole history of the river is recalled, the discovery, the Revolutionary battles, the treason of Aaron Burr, the founding of the Military Academy, the establishment of the landed gentry, commercial exploitation and the industries. Here is the record of the isolated groups of highland people, the Eagle's Nesters, the Pondshiners, the pure Dutch of Gilder's Hollow and the Jackson Whites. Here too against a background of tales that were old when Washington Irving made the Hudson familiar, we see laborers, rivermen, farmers, hunters, and vintners. All of them are but a part of the life of the "Great River of the Mountains"; that part which through time has contributed man-made beauty and occasional ugliness. Here we have a true portrait of the river; one all Americans will enjoy.

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Why labor over well-thought-out floor designs and then sentence them to a limited existence? Your designs deserve better treatment—they deserve to last—and they will, in lifetime terrazzo. In this better floor material colors improve with age. Terrazzo does not break out in a rash of holes, or become dished in spots of heavy traffic. It needs no costly refinishing, waxing, repairs or replacement—that's why it has the lowest cost per foot per year. Besides, terrazzo is sanitary, easy to clean, inviting, practically non-absorbent, in fact terrazzo has everything. Give your floor designs a break—let them live for the future—perpetuate them in lifetime terrazzo. For latest information see our catalog in Sweet's or write

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TO INDIANAPOLIS

The general offices, research laboratories, and manufacturing facilities of Hoffman Specialty Co., Waterbury, Conn., have been moved to a new office and plant location at 1001 York St., Indianapolis, Ind.

COLD STORAGE DOOR QUIZ



Jamison Standard Door
described in Bulletin 122.



Q. What company pioneered in building cold storage doors?

A. JAMISON

Q. What company has developed and introduced practically every cold storage door improvement?

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Q. What company devotes its entire resources and facilities to one task—building the finest cold storage doors possible?

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Not even an earthquake could appreciably damage these Pittsburgh Steeltex-reinforced Stucco walls.



A hurricane blew this house from its foundation yet the Steeltex-reinforced Stucco came through structurally sound.



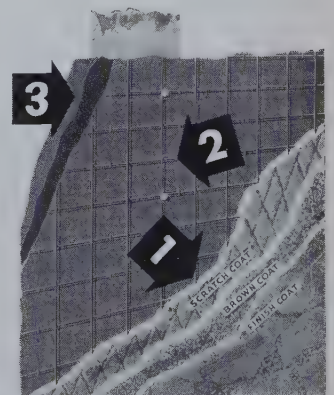
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For new construction or for remodeling, *Pittsburgh Steeltex* assures a better, stronger Stucco job—a job as crack-free and *permanent* as any other building medium. Experts agree that the success of Stucco depends on the three features that are *all* combined in Pittsburgh Steeltex:

1. Reinforcement like concrete by the complete *embedment* of a rigidly welded network of steel wires in the Stucco.

2. Assured long life by great resistance to corrosion through galvanized copper bearing steel wires, additionally sealed in by the surrounding Stucco to further retard oxidation.

3. Protection against dampness and air penetration by a special double-ply mastic filled waterproof backing that seals out moisture, minimizing frame distortion and consequent cracking.



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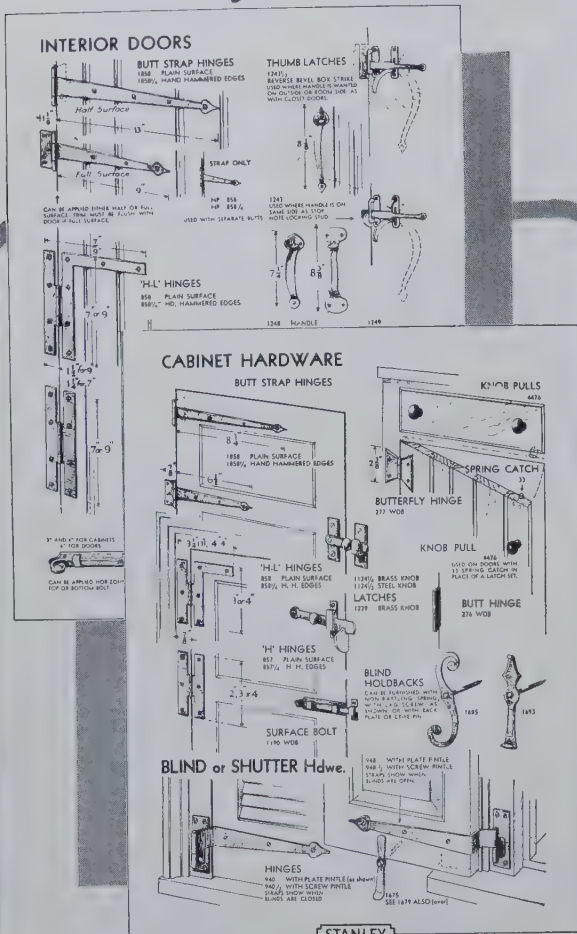
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The Stanley Early American or Colonial line includes all standard hardware for interior doors, cabinets, blinds, shutters, windows, gates, and garages.

Write For This Special Folder



Folder B141 describes the complete line of Stanley Early American or Colonial Hardware. Gives you drawings, measurements, and application details. It will save you a lot of time making up specifications. Write today for a copy. The Stanley Works, New Britain, Connecticut.

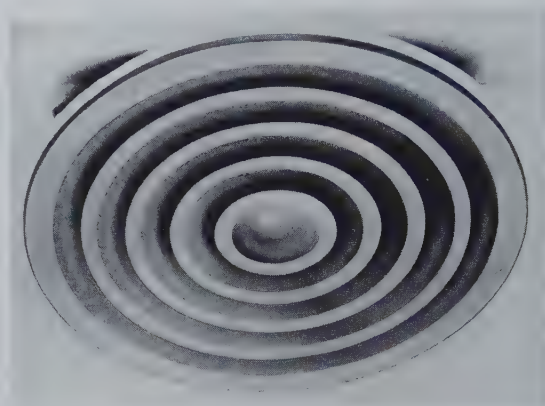
STANLEY

HARDWARE FOR CAREFREE DOORS

NEW PRODUCTS

STAMPED STEEL AEROFUSE OUTLET

Because of the shortage of aluminum, Tuttley & Bailey, Inc., New Britain, Conn., has developed a low-priced, circular ceiling outlet similar in appearance and performance to the standard cast aluminum outlet.



inum outlet, but made in sheet steel. Two types of the standard Aerofuse are available, both identical in appearance. No. 5001 is designed for installation approximately flush with the ceiling, while No. 5001-E is used when outlets are to be installed on exposed ductwork. A combination supply and return unit is available for use where simplification of the ductwork is desirable.

The new stamped steel Aerofuse consists of a series of steel rings formed and spaced to provide circular air passages with alternate low pressure areas. Its performance is the same as that provided by the cast aluminum Aerofuse. The steel outlet is furnished in either enamel or electroplate. The standard finish, aluminum prime coat, may be used as a final finish. Method of installation is the same. The new stamped steel Aerofuse outlet is available in a range of sizes sufficient for any installation required.

BOILER FOR SMALL HOMES

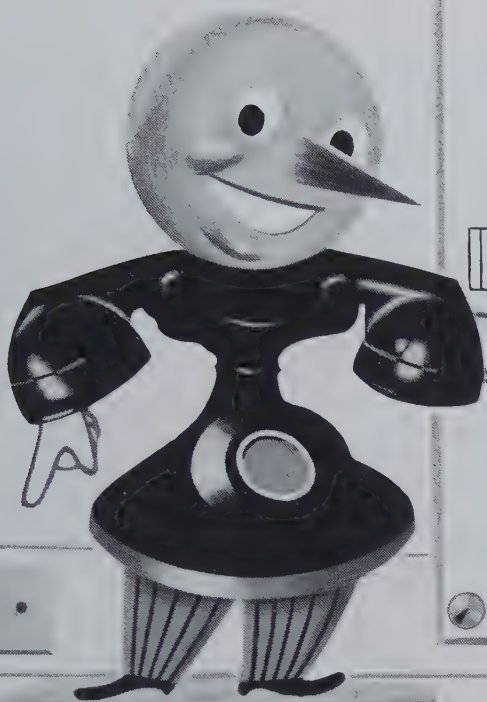
Coalsaver, Jr. is a new hand-fired, coal burning boiler for small homes, recently announced by Columbia Radiator Co., McKeesport, Pa. It features an ash-pit water circulation which permits installation on wooden floors. Since it has low water entry ports, it can be used for gravity systems in small homes without basements.

Other features include dust-seal doors, concealed damper and regulator, 4-ply air-cell insulation, large fuel capacity. All models are finished in a two-tone green steel jacket that conceals doors, gauges, etc. It may be had for either steam or water, comes delivered completely factory-assembled.

NUTONE DOOR CHIME

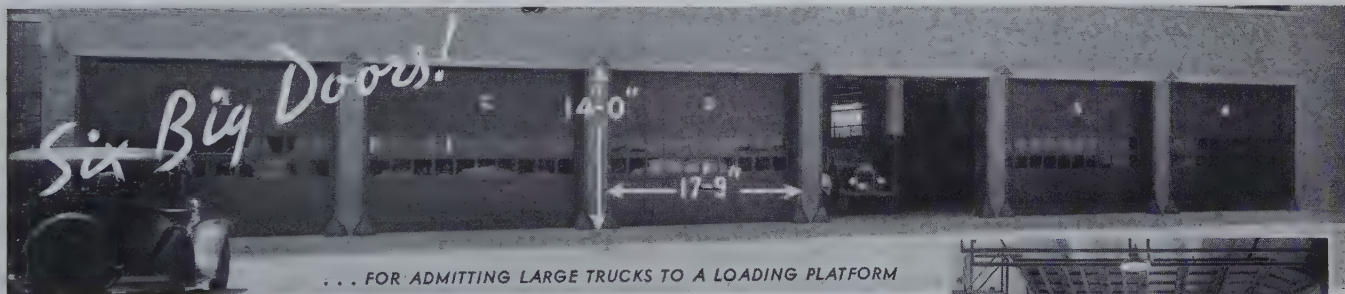
Here is a combination which gives the home owner the temperature, humidity, two musical notes to announce guests, and one musical note for the grocery boy. It is the Weatherman model door chime, new in the 1942 line from NuTone Chimes, Inc., Third and Eggleston, Cincinnati, Ohio. The combination two-door chime has an Airguide thermometer and humidity gauge as an integral part of the unit, is finished in baked ivory, has brass-finished tubes.

(Continued on page 82)



MARKING telephone outlets *on your plans* suggests specifying built-in conduit to carry concealed telephone wires within walls. This avoids the necessity of exposed wiring. When they're installed during construction, telephone outlets — like electric outlets — cost little.

• You'll find the "Architects' and Builders' Service" of your local telephone company glad to help in planning efficient telephone arrangements. Call your nearest Bell Telephone Business Office and use this time-saving service.



... FOR ADMITTING LARGE TRUCKS TO A LOADING PLATFORM

FOR LONG-LIFE, LOW-MAINTENANCE INDUSTRIAL SERVICE USE...

BARCOL OVERDOORS

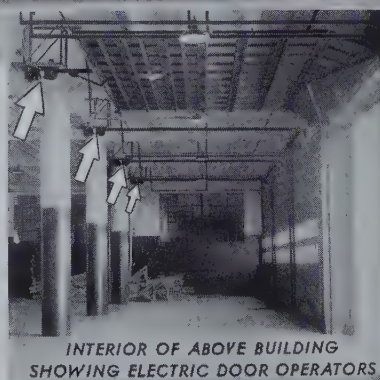
• Special construction features make the Barcol OVERdoor extremely adaptable to industrial buildings, where large size doors are usually required. Design features, such as roller crank closing action, tailored twin torsion counterbalancing springs, and continuous vertical track brackets, help to provide the easy operation and strength necessary for durability under hard use.

ELECTRIC DOOR OPERATORS AND CONTROLS

These motor-driven units are matched to the door requirements, and can be controlled in a number of different ways. Door operators are also available for swinging, sliding, and steel rolling doors, and for swinging and sliding gates. For further details, send for descriptive literature.



SPECIAL TRUCKING DOOR CONTROL



INTERIOR OF ABOVE BUILDING SHOWING ELECTRIC DOOR OPERATORS



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Gentlemen: Please send me free copy of new Bruce Data File on hardwood floorings and floor finishing.

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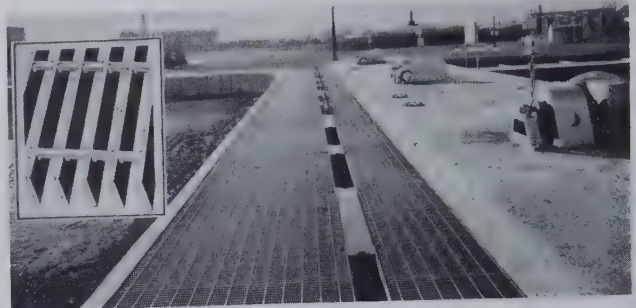
Street.....

City.....State.....

(Continued from page 80)

WELDED STEEL GRATING

Safety, rigidity, durability, self-cleaning, and sure-footed travel are claimed for a new line of welded steel gratings developed by Wm. F. Klemp Co., 6611 S. Melvina Ave., Chicago, Ill. Of one-piece

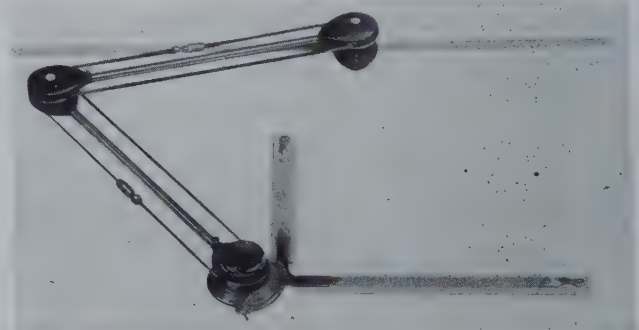


construction, they are suitable for use as passage ways and platforms either inside, outside, or between buildings, and for ramps, stair treads, other needs in industrial and commercial structures.

Gratings are made of hot rolled hexagonal steel bars placed at right angles on top of flat-bearing bars, and electro-welded. Standard grating is made in 24 inch wide panels, in lengths to 35 feet; other widths are also furnished. A "Safe-Load Table" is furnished for bearing depths, and thicknesses to meet requirements.

TRUE LINE DRAFTING MACHINE

In the new True Line drafting machine, Frederick Post Co., Box 803, Chicago, Ill., has built to hair-line accuracy a machine which embodies a protractor, vernier, T-square, scales, and triangles. It



is easily and conveniently operated, comes equipped with "Quick Flick" controls. A flick of the thumb and the scales are released for 15 degrees automatic stops, or for intermediate stops and locking. Again, a flick of the thumb and the scale can be set at any angle with a protractor and vernier reading of zero to zero, eliminating adding and subtracting when the draftsman is engrossed in detail around a focal point in the drawing.

In all True Line models the design permits the use of the instrument with the elbow to the left or right. The protractor may be used at any angle in the complete circle, so that the total area of the board is made accessible. The machine is made of hardened steel.

FOR COMPACT LIVING

Expander is a new development in line with the current trend toward economy of space in building and housing design. It uses the wasted space behind a door for a variety of conveniences. De-

(Continued on page 84)

Enjoy the Comfort of... Modern Drawing Equipment



Get your copy of this new 48 page Hamilton Drafting Furniture Catalog. You can draw in comfort at any of the 26 different styles of drawing tables shown in this new catalog.

Filing equipment that saves time and tracings is fully described in this new catalog. Send for your copy today.

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COPPER...

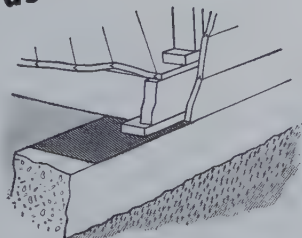
Any workman can put COPPER-ARMORED SISALKRAFT in place—and it costs about ONE-FOURTH as much as 16-oz. rolled copper.

It's an electro-deposited sheet of pure copper, uniform, impervious to moisture — backed up with two layers of wire-tough crossed sisal fibres, two layers of special asphalt, and rugged kraft paper — strong, pliable, won't kink or tear.

COPPER-ARMORED SISALKRAFT makes it possible to use COPPER — a recognized quality feature — in even low-cost construction.

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One of many practical applications. Write for AIA data file, and samples.

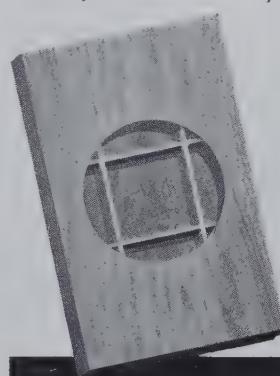


DOORS: NEW LONDONER

HOLLOW-CORE
FLUSH DOORS

TO BE USED THROUGHOUT BUILDING

An excellent specification on any architect's sheet! New Londoner Hollow-Core Flush Doors have been used in all sections of the country and on almost every type of building with outstanding success.

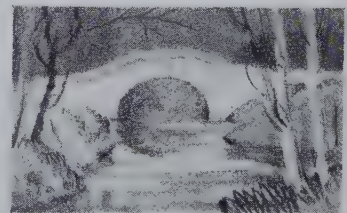
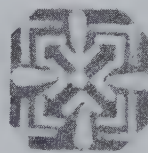


Because New Londoners are resin-bonded by the hot plate process and specially sealed to practically eliminate moisture absorption, they will not sag, shrink or warp. Specify New Londoners for every building you design, and you have successfully solved the door problem. New Londoners are shown in Sweets Catalog, or you may obtain details by writing to us.

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On the contrary, complete drawings or designs can be made almost wholly by using "ARTGUM". The design at the left, for example, was done in this way . . . FIRST, paper was covered with graphite, rubbed smooth with a paper stump . . . Next, the pattern was erased by means of an ordinary erasing shield and "ARTGUM" . . . The sketch at the right was done in much the same way, though detail was later added with the pencil. Endless eraser effects are possible with "ARTGUM".

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STEEL SASH "MERIT-METER"

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MESKER	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
SASH-A	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
SASH-B	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SASH-C	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SASH-D	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SASH-E	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

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Sworn facts taken largely from 1940 edition of Sweet's Architectural Catalog File. A point-by-point comparison of steel window quality features. *Very enlightening.*

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A handy kit that compares the gauge of metal used in MESKER weathering bars with ordinary steel sash.

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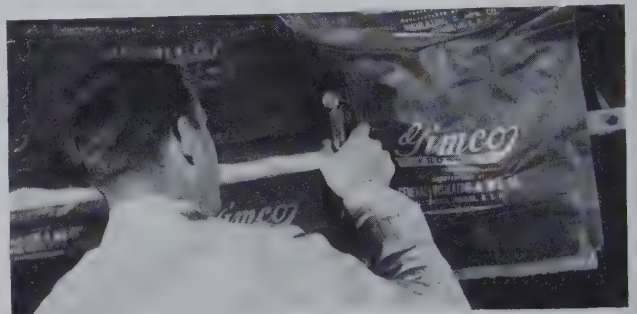
(Continued from page 82)

signed by a firm of New York architects, the Expander units are installed on the inside of a closet or other door, provide about fifteen cubic feet of storage capacity in about two and one-half square feet of floor space.

Standard units for various purposes include two wardrobe models, linen closet, bureau (which will convert a closet into a private dressing room), kitchen cabinet, and bar. Units are sturdily constructed, can be installed easily, quickly in existing homes, apartments, hotels, hospitals, etc., where space is at a premium. Expander units come in natural wood to be finished to the owner's preference. From Expander Inc., 221 W. 57th St., New York.

PACKAGED INSULATION

A blanket type of rock wool insulation, completely encased in paper, with wide flanges extending lengthwise for convenient attachment to studs and

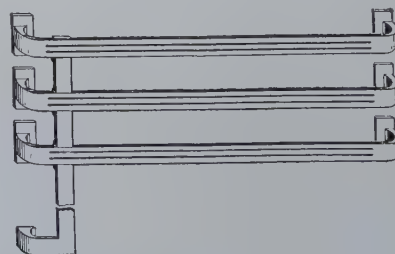


joists, is being produced by General Insulating & Mfg. Co., Alexandria, Ind. Marketed as Gimco Sealal Blankets, one side of it is covered with a heavy vapor proof paper, while the other side is a crepe type paper.

Blankets come in standard widths and thicknesses. The 1-inch thick material is 15 inches wide, 72 feet long; the 2-inch material is 15 inches wide, 36 feet long; the 3-inch material is 15 by 24 inches. The blankets are easy to handle and cut, making for speed and efficiency of application.

ENTRANCE HARDWARE

A complete line of entrance trim for use on all types of commercial jobs has been introduced by



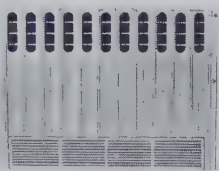
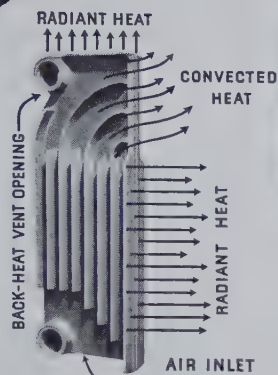
P. & F. Corbin, New Britain, Conn. Included in the new line of push bars and door pulls, thresholds, and

armored front locks is this door pull, made up of three bars with a drop bar. It may be had in any length, to order. The drop bar is 20 inches. Connected by through bolts, it comes in the right hand model as shown. Finishes include brass, bronze, Nickeline, and aluminum.

NEW BLACK STONE

A new stone to take the place of black marble and black granite formerly imported from Belgium and Sweden has been announced by General Ceramics Co., Keasbey, N. J. The stone, known as

(Continued on page 86)



This New Radiator

Gives A Blended Heat

The construction of this New Burnham Radiant Radiator is such that it hastens the mixing or blending of the convected and radiant heat.

The radiant travels the same as light in straight lines, at the rate of 186,000 miles a second.

The convected, due to the chimney arrangement, of the between section fins, hastens its travel, and because of the angle it is thrown into room, speeds up its circulation and ultimate heating.

The two heats blend, giving quicker results. Send for printed matter. See for yourself.

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Irvington, N. Y. Zanesville, Ohio
Dept. K Dept. K

Burnham Boiler

Would you specify solid gold or equal? Some specifications for sash cord read "Samson Spot Cord or equal." That form of specification is dangerous — it leaves the way open for inferior substitution. The difference in first cost for a whole house, between Spot Cord and ordinary sash cord, is usually less than the labor cost of replacing a single broken cord.

Samson Spot Sash Cord is identified by the Colored Spots (Reg. U. S. Pat. Off.)

SAMSON CORDAGE WORKS
BOSTON, MASS.



REG. U. S. PAT. OFF.

SAMSON SPOT

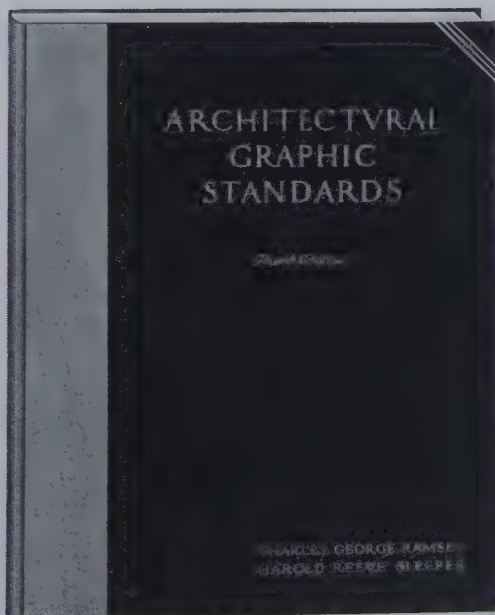
SASH CORD

Here it is, in revised form — the "must" book for ARCHITECTS

... for BUILDERS

... for DRAFTSMEN

... for ENGINEERS



RAMSEY and SLEEPER'S "ARCHITECTURAL GRAPHIC STANDARDS," now thoroughly revised, is of greater use and value than ever before. Information in graphic form which it would take years to assemble from blueprints, pamphlets, magazine sheets and personal notes is accurately presented here in its proper order, in compact space, indexed and cross-indexed for easy reference. The third edition contains 315 plates and 25 pages of index including over 5000 items, counting cross-references. All but 4 plates have been revised, and 73 plates are entirely new. The new book is some 24% larger than the previous edition, and 48% larger than the first edition, yet the price remains the same (\$6.00). For those interested in landscape work, a series of three sheets of tree and shrub silhouettes showing species, sizes, and spacing, including all the most commonly used types, is presented comparatively, in a manner not previously attempted. Park equipment is also presented. Other new subjects covered include: Brick Cavity Walls, Serpentine Walls, Walls According to the New York Building Code, Glass Blocks, Termite Control, Skylights, Safety Treads and Nosings, Metal Railing and Post Attachments, Structural Glass, and Sound Insulation.

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The American Institute of Architects
The Octagon, 1741 New York Avenue
Washington, D. C.

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(Continued from page 84)

Cerastone, is a natural stone, processed under controlled conditions of high temperature and pressure to make it water repellent and proof against chemical corrosion. The firm claims Cerastone is mechanically stronger than the natural stone.

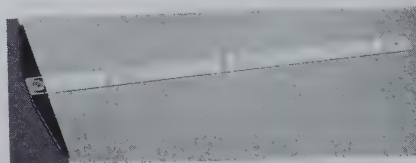
The patented treatment imparts a dull black color to the stone. No paring is necessary since the absorption is zero. The firm recommends Cerastone for base courses and all architectural exteriors, interiors.

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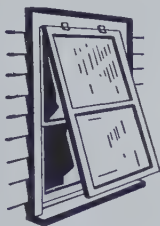
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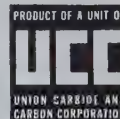
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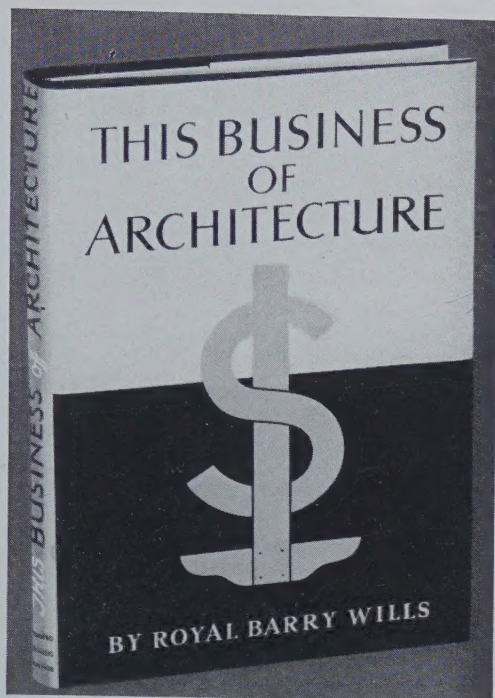
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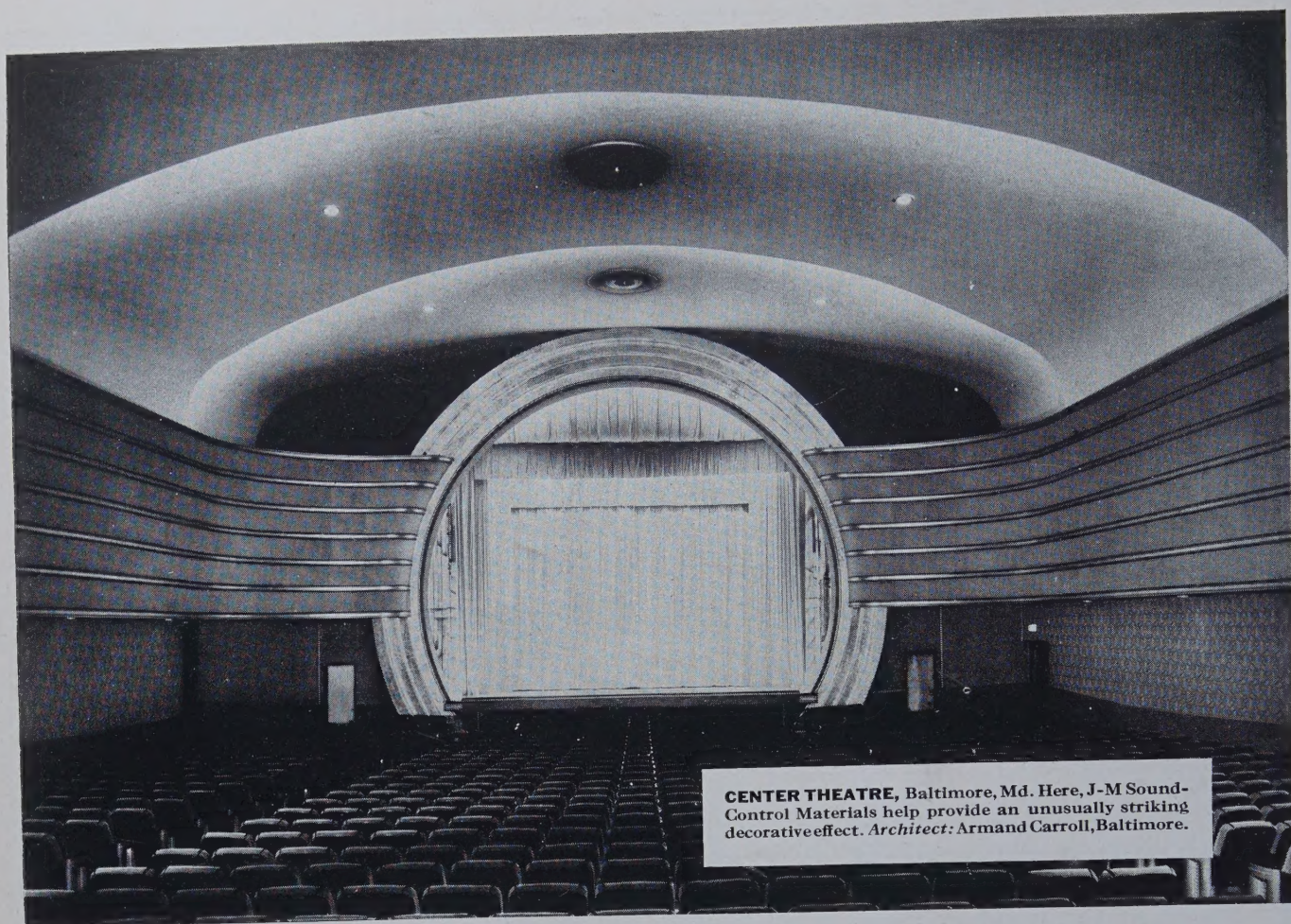
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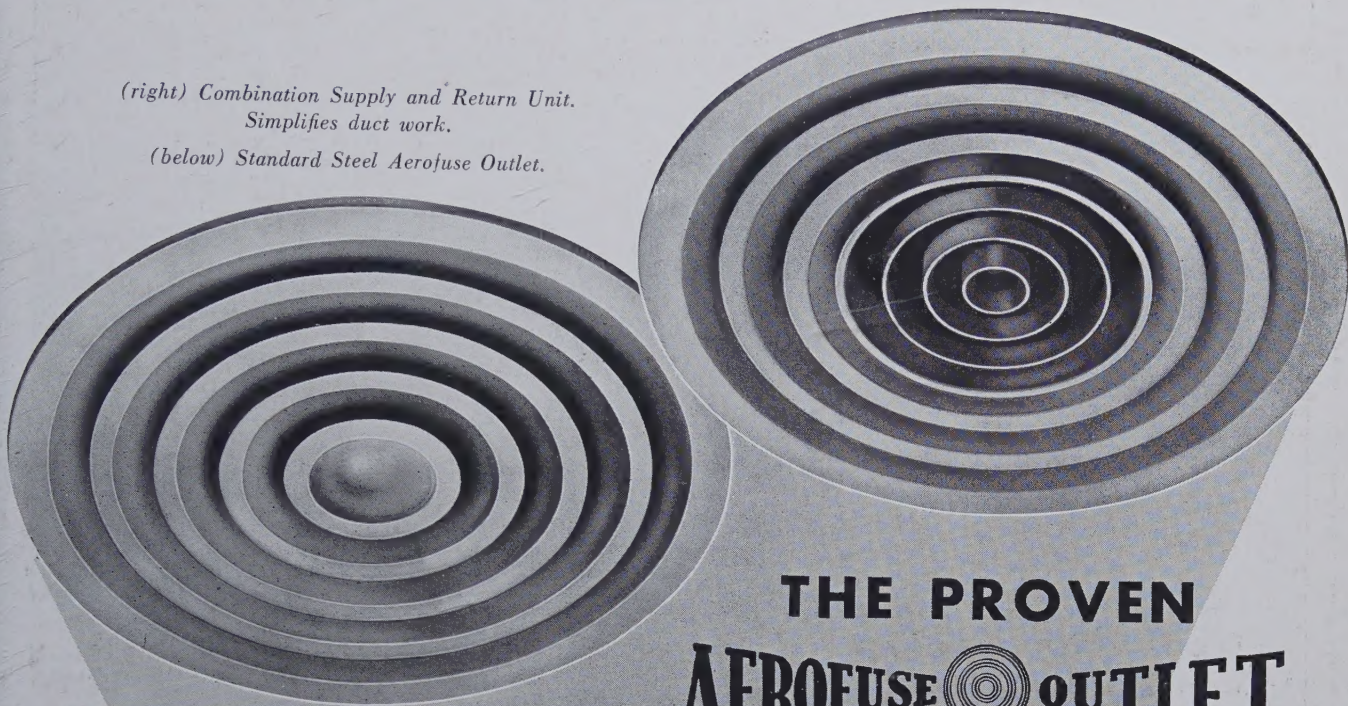
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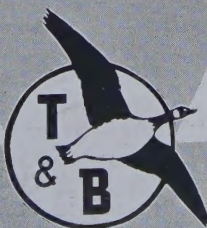
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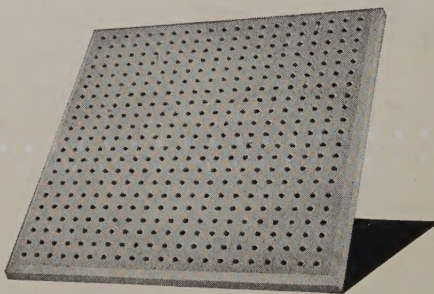
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